California High-Speed Rail Authority

RFP No.: HSR 13-57

Request for Proposals for Design-Build Services for Construction Package 2-3

Reference Material, Part B.1
15% Preliminary Design Plans

04/02/2014 - RFP No.: HSR13-57

CALIFORNIA HIGH-SPEED TRAIN

Alignment Plans



RECORD SET 15% DESIGN SUBMISSION

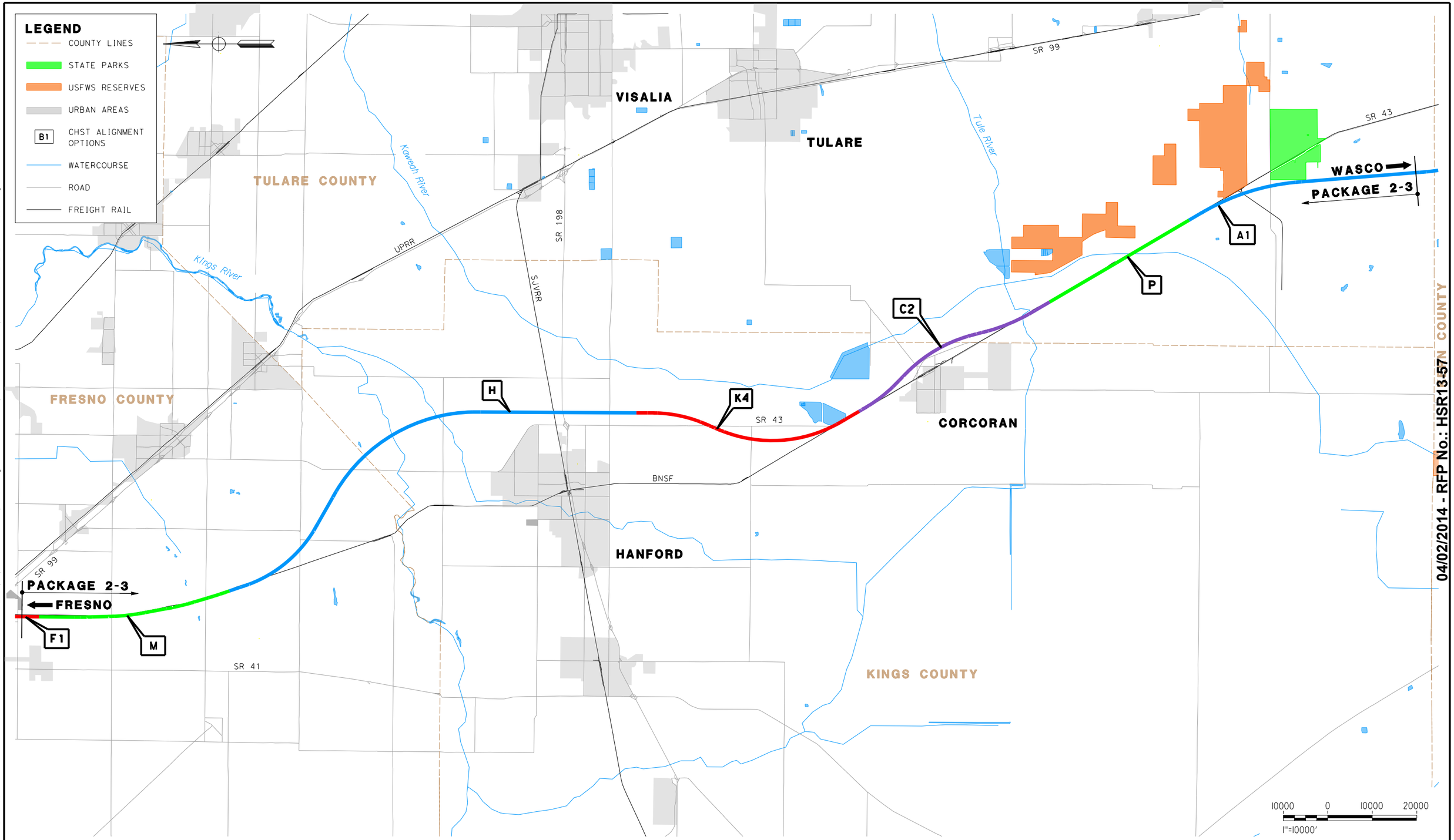
Fresno to Bakersfield

Plans and Profiles and Cross Sections

December 2013

CALIFORNIA High-Speed Rail Authority

04/02/2014 - RFP No.: HSR13-57



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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PACKAGE 2-3
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. TT-B0001
SCALE AS SHOWN
SHEET NO. 1 OF 8

GENERAL SHEETS

DRAWING No	DRAWING DESCRIPTION	SHEET No
TT-B0001	ALIGNMENT - LOCATION MAP	1 OF 8
GE-A0019	ALIGNMENT - INDEX OF SHEETS (SHEET 1 OF 2)	2 OF 8
GE-A0020	ALIGNMENT - INDEX OF SHEETS (SHEET 2 OF 2)	3 OF 8
CB0010	GENERAL - ABBREVIATIONS AND LEGENDS	4 OF 8
CB0011	GENERAL - ABBREVIATIONS AND LEGENDS	5 OF 8
CB0012	ALIGNMENT - CURVE DATA - SHEET 1 OF 2	6 OF 8
CB0013	ALIGNMENT - CURVE DATA - SHEET 2 OF 2	7 OF 8
CB0016	WILDLIFE CROSSINGS - LOCATION MAP	8 OF 8

ALIGNMENT F1 - FRESNO SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1650	FRESNO SUBSECTION - ALIGNMENT F1 - STA. 257+24 TO 627+07 - KEY MAP	1 OF 24
~~CB1657~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 257+24 TO 261+00 - PLAN AND PROFILE~~	~~2 OF 24~~
~~CB1658~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 261+00 TO 275+00 - PLAN AND PROFILE~~	~~3 OF 24~~
~~CB1659~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 275+00 TO 289+00 - PLAN AND PROFILE~~	~~4 OF 24~~
~~CB1660~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 289+00 TO 303+00 - PLAN AND PROFILE~~	~~5 OF 24~~
~~CB1661~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 303+00 TO 317+25 - PLAN AND PROFILE~~	~~6 OF 24~~
~~CB1662~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 317+25 TO 345+00 - PLAN AND PROFILE~~	~~7 OF 24~~
~~CB1663~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 345+00 TO 373+00 - PLAN AND PROFILE~~	~~8 OF 24~~
~~CB1664~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 373+00 TO 401+00 - PLAN AND PROFILE~~	~~9 OF 24~~
~~CB1665~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 401+00 TO 429+00 - PLAN AND PROFILE~~	~~10 OF 24~~
~~CB1666~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 429+00 TO 457+00 - PLAN AND PROFILE~~	~~11 OF 24~~
~~CB1667~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 457+00 TO 485+00 - PLAN AND PROFILE~~	~~12 OF 24~~
~~CB1668~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 485+00 TO 513+00 - PLAN AND PROFILE~~	~~13 OF 24~~
~~CB1669~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 513+00 TO 541+00 - PLAN AND PROFILE~~	~~14 OF 24~~
~~CB1670~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - STA. 541+00 TO 569+00 - PLAN AND PROFILE~~	~~15 OF 24~~
CB1671	FRESNO SUBSECTION - ALIGNMENT F1 - STA. 569+00 TO 598+00 - PLAN AND PROFILE	16 OF 24
CB1672	FRESNO SUBSECTION - ALIGNMENT F1 - STA. 598+00 TO 627+07 - PLAN AND PROFILE	17 OF 24
~~CB3010~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~18 OF 24~~
~~CB3011~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~19 OF 24~~
~~CB3012~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~20 OF 24~~
~~CB3013~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~21 OF 24~~
~~CB3014~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~22 OF 24~~
~~CB3015~~	~~FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS~~	~~23 OF 24~~
CB3016	FRESNO SUBSECTION - ALIGNMENT F1 - CROSS SECTIONS	24 OF 24

ALIGNMENT M - MONMOUTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1790	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 630+25 TO 1065+07 - KEY MAP	1 OF 11
CB1791	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 630+25 TO 687+00 - PLAN AND PROFILE	2 OF 11
CB1792	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 687+00 TO 743+00 - PLAN AND PROFILE	3 OF 11
CB1793	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 743+00 TO 799+00 - PLAN AND PROFILE	4 OF 11
CB1794	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 799+00 TO 855+00 - PLAN AND PROFILE	5 OF 11
CB1795	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 855+00 TO 911+00 - PLAN AND PROFILE	6 OF 11
CB1796	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 911+00 TO 967+00 - PLAN AND PROFILE	7 OF 11
CB1797	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 967+00 TO 1023+00 - PLAN AND PROFILE	8 OF 11
CB1798	MONMOUTH SUBSECTION - ALIGNMENT M - STA. 1023+00 TO 1065+07 - PLAN AND PROFILE	9 OF 11
CB3140	MONMOUTH SUBSECTION - ALIGNMENT M - CROSS SECTIONS	10 OF 11
CB3141	MONMOUTH SUBSECTION - ALIGNMENT M - CROSS SECTIONS	11 OF 11

ALIGNMENT H - HANFORD SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1800	HANFORD SUBSECTION - ALIGNMENT H - STA. 1065+07 TO 2144+63 - KEY MAP	1 OF 31
CB1808	HANFORD SUBSECTION - ALIGNMENT H - STA. 1065+07 TO 1080+00 - PLAN AND PROFILE	2 OF 31
CB1809	HANFORD SUBSECTION - ALIGNMENT H - STA. 1080+00 TO 1136+00 - PLAN AND PROFILE	3 OF 31
CB1810	HANFORD SUBSECTION - ALIGNMENT H - STA. 1136+00 TO 1192+00 - PLAN AND PROFILE	4 OF 31
CB1811	HANFORD SUBSECTION - ALIGNMENT H - STA. 1192+00 TO 1248+00 - PLAN AND PROFILE	5 OF 31
CB1812	HANFORD SUBSECTION - ALIGNMENT H - STA. 1248+00 TO 1304+00 - PLAN AND PROFILE	6 OF 31
CB1813	HANFORD SUBSECTION - ALIGNMENT H - STA. 1304+00 TO 1360+00 - PLAN AND PROFILE	7 OF 31
CB1814	HANFORD SUBSECTION - ALIGNMENT H - STA. 1360+00 TO 1416+00 - PLAN AND PROFILE	8 OF 31
CB1815	HANFORD SUBSECTION - ALIGNMENT H - STA. 1416+00 TO 1472+00 - PLAN AND PROFILE	9 OF 31
CB1816	HANFORD SUBSECTION - ALIGNMENT H - STA. 1472+00 TO 1528+00 - PLAN AND PROFILE	10 OF 31
CB1817	HANFORD SUBSECTION - ALIGNMENT H - STA. 1528+00 TO 1584+00 - PLAN AND PROFILE	11 OF 31
CB1818	HANFORD SUBSECTION - ALIGNMENT H - STA. 1584+00 TO 1640+00 - PLAN AND PROFILE	12 OF 31
CB1819	HANFORD SUBSECTION - ALIGNMENT H - STA. 1640+00 TO 1696+00 - PLAN AND PROFILE	13 OF 31
CB1820	HANFORD SUBSECTION - ALIGNMENT H - STA. 1696+00 TO 1752+00 - PLAN AND PROFILE	14 OF 31
CB1821	HANFORD SUBSECTION - ALIGNMENT H - STA. 1752+00 TO 1808+00 - PLAN AND PROFILE	15 OF 31
CB1822	HANFORD SUBSECTION - ALIGNMENT H - STA. 1808+00 TO 1864+00 - PLAN AND PROFILE	16 OF 31
CB1823	HANFORD SUBSECTION - ALIGNMENT H - STA. 1864+00 TO 1914+00 - PLAN AND PROFILE	17 OF 31
CB1824	HANFORD SUBSECTION - ALIGNMENT H - STA. 1914+00 TO 1928+00 - PLAN AND PROFILE	18 OF 31
CB1825	HANFORD SUBSECTION - ALIGNMENT H - STA. 1928+00 TO 1942+00 - PLAN AND PROFILE	19 OF 31
CB1826	HANFORD SUBSECTION - ALIGNMENT H - STA. 1942+00 TO 1956+00 - PLAN AND PROFILE	20 OF 31
CB1827	HANFORD SUBSECTION - ALIGNMENT H - STA. 1956+00 TO 1970+00 - PLAN AND PROFILE	21 OF 31
CB1828	HANFORD SUBSECTION - ALIGNMENT H - STA. 1970+00 TO 1984+00 - PLAN AND PROFILE	22 OF 31
CB1829	HANFORD SUBSECTION - ALIGNMENT H - STA. 1984+00 TO 2032+00 - PLAN AND PROFILE	23 OF 31
CB1830	HANFORD SUBSECTION - ALIGNMENT H - STA. 2032+00 TO 2088+00 - PLAN AND PROFILE	24 OF 31
CB1831	HANFORD SUBSECTION - ALIGNMENT H - STA. 2088+00 TO 2144+63 - PLAN AND PROFILE	25 OF 31
CB3151	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	26 OF 31
CB3152	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	27 OF 31
CB3153	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	28 OF 31
CB3154	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	29 OF 31
CB3155	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	30 OF 31
CB3156	HANFORD SUBSECTION - ALIGNMENT H - CROSS SECTIONS	31 OF 31

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DRAWN BY J. VALENZUELA
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SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
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SCALE NO SCALE
SHEET NO. 2 OF 8

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ALIGNMENT K4 - KAWEAH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1130	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2074+96 TO 2598+60 - KEY MAP	1 OF 15
CB1131	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2074+96 TO 2130+00 - PLAN AND PROFILE	2 OF 15
CB1132	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2130+00 TO 2186+00 - PLAN AND PROFILE	3 OF 15
CB1133	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2186+00 TO 2242+00 - PLAN AND PROFILE	4 OF 15
CB1134	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2242+00 TO 2298+00 - PLAN AND PROFILE	5 OF 15
CB1135	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2298+00 TO 2354+00 - PLAN AND PROFILE	6 OF 15
CB1136	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2354+00 TO 2410+00 - PLAN AND PROFILE	7 OF 15
CB1137	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2410+00 TO 2466+00 - PLAN AND PROFILE	8 OF 15
CB1138	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2466+00 TO 2522+00 - PLAN AND PROFILE	9 OF 15
CB1139	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2522+00 TO 2578+00 - PLAN AND PROFILE	10 OF 15
CB1140	KAWEAH SUBSECTION - ALIGNMENT K4 - STA. 2578+00 TO 2598+60 - PLAN AND PROFILE	11 OF 15
CB3171	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS SECTIONS	12 OF 15
CB3172	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS SECTIONS	13 OF 15
CB3173	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS SECTIONS	14 OF 15
CB3174	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS SECTIONS	15 OF 15

ALIGNMENT C2 - CORCORAN SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1850	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2594+81 TO 3096+00 - KEY MAP	1 OF 16
CB1861	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2594+81 TO 2650+00 - PLAN AND PROFILE	2 OF 16
CB1862	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2650+00 TO 2706+00 - PLAN AND PROFILE	3 OF 16
CB1863	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2706+00 TO 2762+00 - PLAN AND PROFILE	4 OF 16
CB1864	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2762+00 TO 2818+00 - PLAN AND PROFILE	5 OF 16
CB1865	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2818+00 TO 2874+00 - PLAN AND PROFILE	6 OF 16
CB1866	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2874+00 TO 2930+00 - PLAN AND PROFILE	7 OF 16
CB1867	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2930+00 TO 2986+00 - PLAN AND PROFILE	8 OF 16
CB1868	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 2986+00 TO 3042+00 - PLAN AND PROFILE	9 OF 16
CB1869	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STA. 3042+00 TO 3096+00 - PLAN AND PROFILE	10 OF 16
CB3255	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	11 OF 16
CB3256	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	12 OF 16
CB3257	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	13 OF 16
CB3258	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	14 OF 16
CB3259	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	15 OF 16
CB3260	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - CROSS SECTIONS	16 OF 16

ALIGNMENT P - PIXLEY SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1300	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3096+00 TO 3459+24 - KEY MAP	1 OF 9
CB1301	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3096+00 TO 3152+00 - PLAN AND PROFILE	2 OF 9
CB1302	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3152+00 TO 3208+00 - PLAN AND PROFILE	3 OF 9
CB1303	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3208+00 TO 3264+00 - PLAN AND PROFILE	4 OF 9
CB1304	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3264+00 TO 3320+00 - PLAN AND PROFILE	5 OF 9
CB1305	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3320+00 TO 3376+00 - PLAN AND PROFILE	6 OF 9
CB1306	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3376+00 TO 3432+00 - PLAN AND PROFILE	7 OF 9
CB1307	PIXLEY SUBSECTION - ALIGNMENT P - STA. 3432+00 TO 3459+24 - PLAN AND PROFILE	8 OF 9
CB3301	PIXLEY SUBSECTION - ALIGNMENT P - CROSS SECTIONS	9 OF 9

ALIGNMENT A1 - ALLENSWORTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB1400	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 3919+50 TO 4926+16 - KEY MAP	1 OF 21
CB1401	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 3919+50 TO 3976+00 - PLAN AND PROFILE	2 OF 21
CB1402	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 3976+00 TO 4032+00 - PLAN AND PROFILE	3 OF 21
CB1750	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4032+00 TO 4088+00 - PLAN AND PROFILE	4 OF 21
CB1751	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4088+00 TO 4144+00 - PLAN AND PROFILE	5 OF 21
CB1752	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4144+00 TO 4200+00 - PLAN AND PROFILE	6 OF 21
CB1753	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4200+00 TO 4256+00 - PLAN AND PROFILE	7 OF 21
CB1754	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4256+00 TO 4312+00 - PLAN AND PROFILE	8 OF 21
CB1755	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4312+00 TO 4368+00 - PLAN AND PROFILE	9 OF 21
CB1756	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4368+00 TO 4424+00 - PLAN AND PROFILE	10 OF 21
CB1757	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4424+00 TO 4480+00 - PLAN AND PROFILE	11 OF 21
~~CB1758~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4480+00 TO 4536+00 - PLAN AND PROFILE~~	~~12 OF 21~~
~~CB1759~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4536+00 TO 4592+00 - PLAN AND PROFILE~~	~~13 OF 21~~
~~CB1760~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4592+00 TO 4648+00 - PLAN AND PROFILE~~	~~14 OF 21~~
~~CB1761~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4648+00 TO 4704+00 - PLAN AND PROFILE~~	~~15 OF 21~~
~~CB1762~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4704+00 TO 4760+00 - PLAN AND PROFILE~~	~~16 OF 21~~
~~CB1763~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4760+00 TO 4816+00 - PLAN AND PROFILE~~	~~17 OF 21~~
~~CB1764~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4816+00 TO 4872+00 - PLAN AND PROFILE~~	~~18 OF 21~~
~~CB1765~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - STA. 4872+00 TO 4926+16 - PLAN AND PROFILE~~	~~19 OF 21~~
CB3401	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - CROSS SECTIONS	20 OF 21
CB3402	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - CROSS SECTIONS	21 OF 21

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FRESNO TO BAKERSFIELD

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INDEX OF SHEETS
SHEET 2 OF 2

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SCALE NO SCALE
SHEET NO. 3 OF 8

A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BNSF	BURLINGTON NORTH & SANTA FE
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CLEARANCE POINT
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD
CULV	CULVERT
℄	CENTERLINE

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXWY	EXPRESSWAY
EXT	EXTERIOR

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY
FPLM	FULL SPAN PRECAST LAUNCHING METHOD

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HR	HOUR
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HS	HIGH STRENGTH
HST	HIGH SPEED TRAIN
HSR	HIGH SPEED RAIL
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LCB	LEAN CONCRETE BASE
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LC	LENGTH OF CURVE
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL
MSS	MOVING SCAFFOLDING SYSTEM

N

N	NORTH, NORTHING
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
N/A	NOT APPLICABLE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
ℙ,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

RFP No.: HSR13-57

04/02/2014 - RFP

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FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0010
SCALE NO SCALE
SHEET NO. 4 OF 8

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Paul.Tonkin

P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
R/W, ROW	RIGHT OF WAY
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
S	STATION LINE
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES
SJVR	SAN JOAQUIN VALLEY RAILROAD

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TM	TECHNICAL MEMORANDUM
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
TS	TRAFFIC SIGNAL, TUBULAR STEEL, TANGET TO SPIRAL
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

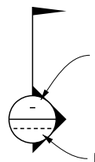
X

X SEC	CROSS SECTION
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

LEGEND



—-E— PROPOSED ELECTRICITY LINE

—-e— EXISTING ELECTRICITY LINE

—-E—(oh)— EXISTING OVERHEAD ELECTRICITY LINE

—-E—(OH)— PROPOSED OVERHEAD ELECTRICTY LINE

PROPOSED HST RIGHT OF WAY

PROPOSED HST TRACK CENTERLINE

RETAINING WALL

TOE OF SLOPE / TOP OF CUT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

OR TRACK (PLAN AND ELEVATION)

REL TRACK TO BE REMOVED AND RELOCATED PER BNSF

REMOVE BASE & SURFACING

SOUND BARRIER (POTENTIAL)

DIRECTION OF FLOW

WATER SURFACE

GENERAL NOTES

1. TRACK PROFILE IS DESIGNED AS TOP OF THE LOW RAIL. VERTICAL CLEARANCE REQUIREMENTS ARE MEASURED FROM THE TOP OF THE HIGH RAIL ON SUPERELEVATED TRACK. THE CLEARANCE ENVELOPES SHOWN DEMONSTRATE THE MINIMUM CLEARANCE REQUIREMENTS.

2. MINIMUM VERTICAL CLEARANCE REQUIREMENTS TO CANALS AND DITCHES ARE NOT KNOWN. FURTHER CONSULTATION WITH THE WATERCOURSE OWNERS WILL BE REQUIRED TO DETERMINE NECESSARY CLEARANCES.

3. THE FOLLOWING ARE ROADWAY DESIGN STANDARDS AND GUIDELINES:
   A. CALTRANS HIGHWAY DESIGN MANUAL (2012)
   B. AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011)
   C. AASHTO ROADSIDE DESIGN GUIDE (2011)
   D. APPLICABLE LOCAL DESIGN STANDARD AND GUIDELINES (I.E., CITY OF FRESNO)

4. THE FEMA FLOODPLAIN BOUNDARIES ARE CALLED OUT AS "LIMIT OF 100YR FEMA FLOODPLAIN". THE LIMITS OF THE MODELED 100 YEAR WATER SURFACE ELEVATIONS (WSE) ARE APPROXIMATE AND ARE MARKED WITH THE NAME OF THE WATERBODY ASSOCIATED WITH THE MODELED FLOODING, E.G. "LIMIT OF POSO CREEK FLOODPLAIN".

5. THE STRUCTURE DESIGN ASSUMES THAT THE DEPTH FROM TOR TO TOP OF DECK IS 2'-6" THROUGHOUT. HOWEVER, WHERE BALLASTED TRACK FORM IS USED, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-9" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE, AND PROTECTION LAYER IF REQUIRED. FOR SLAB TRACKFORM, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-6" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE AND PROTECTION LAYER IF REQUIRED.

6. WHERE THE VERTICAL ALIGNMENT GRADE IS LESS THAN 0.5% THE UPPER SURFACE OF THE VIADUCT STRUCTURE SHALL BE PROFILED TO GIVE A MINIMUM LONGITUDINAL FALL OF 0.5%. TYPICALLY FOR A SPAN OF 120'-00" ON A 0% GRADE SECTION OF VIADUCT THIS COULD BE ACHIEVED BY MODIFYING THE CROSS SLOPE OF THE GIRDER LINEARLY BETWEEN 0.8% AT MID-SPAN TO 2% AT EACH END.

7. WHEN LATERAL SEPARATION BETWEEN THE CONVENTIONAL RAILROAD AND HST SYSTEM IS LESS THAN 102', A SITE SPECIFIC HAZARD ANALYSIS WILL BE CONDUCTED TO DETERMINE WHAT SPECIFIC COLLISION PROTECTION MEASURES MAY NEED TO BE IMPLEMENTED.

8. RIP-RAP PROTECTION IS REQUIRED FOR EMBANKMENTS WITHIN FEMA SPECIAL FLOOD HAZARD ZONES, IN ACCORDANCE WITH DESIGN CRITERIA.

9. HST ALIGNMENT CONTROL LINE IS DESIGNED AS THE CENTERLINE BETWEEN THE TWO MAINLINE TRACKS.

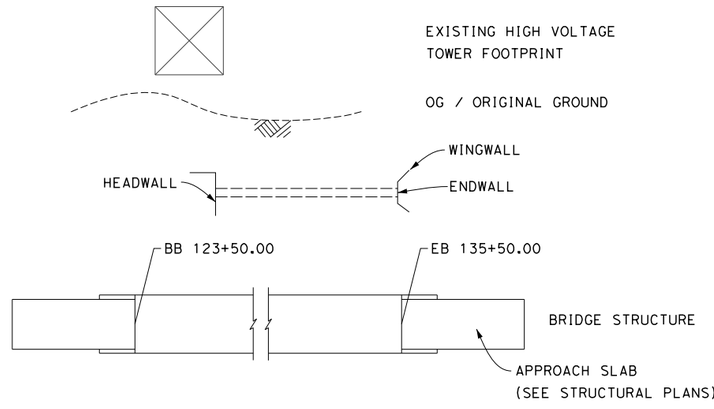
10. TRACK FORM USED IN TYPICAL SECTIONS IS INDICATIVE.

DIRECTION OF TRAFFIC

POINT OF MINIMUM VERTICAL CLEARANCE
ROAD CLOSURE (ROADWAYS)

[1] LINE DATA

(1) (3) CURVE DATA (ALIGNMENTS)
CURVE DATA (STRUCTURES)



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FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0011
SCALE NO SCALE
SHEET NO. 5 OF 8

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ALIGNMENT F1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~1~~	~~220~~	~~21296.75~~	~~6.75~~	~~2.34~~	~~3000/2500~~	~~12747~~

ALIGNMENT M

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
2	250	70000	2.50	1.07	1200	1500
3	250	45000	3.75	1.81	1500	5364
4	250	45000	3.75	1.81	1500	3363
5	250	70000	2.50	1.07	1200	1486

ALIGNMENT H

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
6	250	29000	5.75	2.87	2000	19086
7	250	36500	4.25	2.60	1700	37009

ALIGNMENT HW

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~30~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~13826~~
~~31~~	~~250~~	~~20000.25~~	~~6.00~~	~~2.93~~	~~2500~~	~~4513~~

ALIGNMENT HW2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~130~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~13827~~
~~131~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~10443~~

ALIGNMENT K1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~32~~	~~250~~	~~28600~~	~~6.00~~	~~2.74~~	~~2500~~	~~4145~~
~~33~~	~~250~~	~~100000~~	~~1.50~~	~~1.00~~	~~1200~~	~~4694~~
~~34~~	~~250~~	~~85000~~	~~1.75~~	~~1.19~~	~~1200~~	~~1237~~
~~35~~	~~250~~	~~170000~~	~~1.00~~	~~0.47~~	~~1200~~	~~3692~~

ALIGNMENT K2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~36~~	~~220~~	~~22000.25~~	~~6.00~~	~~2.00~~	~~1000~~	~~8446~~
~~37~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1600~~	~~6233~~

ALIGNMENT K3

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~40~~	~~250~~	~~28600~~	~~6.00~~	~~2.74~~	~~2500~~	~~9439~~
~~41~~	~~250~~	~~28600~~	~~6.00~~	~~2.74~~	~~2500~~	~~24733~~

ALIGNMENT K4

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
8	250	30500	5.50	2.70	2300	9796
9	250	30500	5.50	2.70	2300	26096

ALIGNMENT K5

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~133~~	~~250~~	~~100000~~	~~1.50~~	~~1.00~~	~~1200~~	~~26432~~
~~134~~	~~250~~	~~85000~~	~~1.75~~	~~1.19~~	~~1200~~	~~1237~~
~~135~~	~~250~~	~~170000~~	~~0.00~~	~~1.47~~	~~1200~~	~~3692~~

ALIGNMENT K6

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~137~~	~~250~~	~~60000~~	~~2.75~~	~~1.42~~	~~1200~~	~~20392~~
~~138~~	~~250~~	~~60000~~	~~2.75~~	~~1.42~~	~~1200~~	~~3000~~

ALIGNMENT C1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~50~~	~~250~~	~~140000~~	~~0.75~~	~~1.04~~	~~1200~~	~~3007~~
~~51~~	~~250~~	~~66000~~	~~2.25~~	~~1.54~~	~~1200~~	~~1100~~
~~52~~	~~250~~	~~80000~~	~~2.00~~	~~1.13~~	~~900~~	~~2655~~
~~53~~	~~250~~	~~80000~~	~~2.00~~	~~1.13~~	~~900~~	~~2700~~

ALIGNMENT C2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
10	250	33000	5.00	2.58	2000	6870
11	250	32000	5.25	2.56	2100	15313
12	250	41000	4.00	2.10	1600	9735

ALIGNMENT C3

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~60~~	~~250~~	~~315000~~	~~0.00~~	~~0.79~~	~~1200~~	~~1215~~
~~61~~	~~250~~	~~116500~~	~~1.00~~	~~1.15~~	~~900~~	~~1031~~
~~62~~	~~250~~	~~125000~~	~~1.00~~	~~1.00~~	~~900~~	~~1166~~

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DRAWN BY P. TONKIN
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IN CHARGE R. COFFIN
DATE 02/04/14

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALIGNMENT
CURVE DATA
SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0012
SCALE NO SCALE
SHEET NO. 6 OF 8

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ALIGNMENT P

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
13	250	2000000	0.00	0.13	0	1999

ALIGNMENT A1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
14	250	50500	3.50	1.45	1400	21393
~~15~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~25440.03~~
~~16~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~20556/22710~~

ALIGNMENT A2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~70~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~10257.35~~
~~71~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~11168.36~~

ALIGNMENT L1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~16~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~29556~~

ALIGNMENT L2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~16~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~22710~~
~~92~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~15609~~

ALIGNMENT L4

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~111~~	~~250~~	~~45000~~	~~3.75~~	~~1.81~~	~~1500~~	~~22536~~

ALIGNMENT WS1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~17~~	~~220~~	~~22000.25~~	~~6.50~~	~~2.30~~	~~2100~~	~~15300~~
~~18~~	~~250~~	~~640000~~	~~0.00~~	~~0.39~~	~~1200~~	~~4007~~
~~19~~	~~250~~	~~50000~~	~~2.75~~	~~2.25~~	~~1200~~	~~2221~~
~~20~~	~~250~~	~~60000~~	~~2.50~~	~~1.18~~	~~1200~~	~~4447~~
~~21~~	~~250~~	~~69000~~	~~2.50~~	~~1.12~~	~~1200~~	~~1216~~

ALIGNMENT WS2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~80~~	~~250~~	~~60000~~	~~3.00~~	~~1.17~~	~~1200~~	~~14392~~

ALIGNMENT B1

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~22~~	~~250~~	~~60000~~	~~2.75~~	~~1.42~~	~~1200~~	~~1200~~
~~23~~	~~220~~	~~19500.25~~	~~7.00~~	~~2.92~~	~~1714~~	~~17153~~
~~24~~	~~220~~	~~19500.25~~	~~7.00~~	~~2.92~~	~~1714~~	~~2676~~
~~25~~	~~220~~	~~30000.25~~	~~3.50~~	~~2.35~~	~~956~~	~~1291~~
~~26~~	~~220~~	~~20000.34~~	~~7.00~~	~~2.60~~	~~1720~~	~~5340~~

ALIGNMENT B2

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~100~~	~~250~~	~~60000~~	~~2.75~~	~~1.42~~	~~1200~~	~~1200~~
~~101~~	~~220~~	~~19500.25~~	~~7.00~~	~~2.92~~	~~1700~~	~~17086.93~~
~~102~~	~~220~~	~~19600~~	~~7.00~~	~~2.84~~	~~1692.55~~	~~2375~~
~~103~~	~~220~~	~~23500~~	~~5.50~~	~~2.74~~	~~1331.22~~	~~1432.82~~
~~104~~	~~220~~	~~33000~~	~~3.50~~	~~2.37~~	~~1050~~	~~2770.34~~
~~105~~	~~220~~	~~20000~~	~~7.00~~	~~2.60~~	~~1720.24~~	~~4097.46~~

ALIGNMENT B3

CURVE No.	DESIGN SPEED (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~120~~	~~250~~	~~60000~~	~~2.75~~	~~1.42~~	~~1200~~	~~1200~~
~~121~~	~~220~~	~~19500.25~~	~~7.00~~	~~2.92~~	~~1700~~	~~17087~~
~~122~~	~~220~~	~~19600~~	~~7.00~~	~~2.84~~	~~1700~~	~~2375~~
~~123~~	~~130~~	~~10100.25~~	~~3.75~~	~~2.94~~	~~640~~	~~1245~~
~~124~~	~~125~~	~~8100.25~~	~~4.75~~	~~2.96~~	~~700~~	~~1096~~
~~125~~	~~145~~	~~9500~~	~~6.00~~	~~2.85~~	~~1300~~	~~2842~~

STANDARD STATION TRACK RETURN CURVE

DESIGN SPEED (MPH)	TOTAL LENGTH ALONG MAIN TRACK	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
110	1364.60	13500	1.25	2.34	160	320.21

B3 STATION TRACKS RETURN CURVE

DESIGN SPEED (MPH)	TOTAL LENGTH ALONG MAIN TRACK	RADIUS (R) (FT)	ACTUAL SUPERELEVATION EA (IN)	UNBALANCED SUPERELEVATION EU (IN)	SPIRAL LENGTH LS (FT)	CURVE LENGTH LC (FT)
~~80~~	~~991.80~~	~~7000~~	~~1.25~~	~~2.41~~	~~120~~	~~222.24~~

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. TONKIN
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

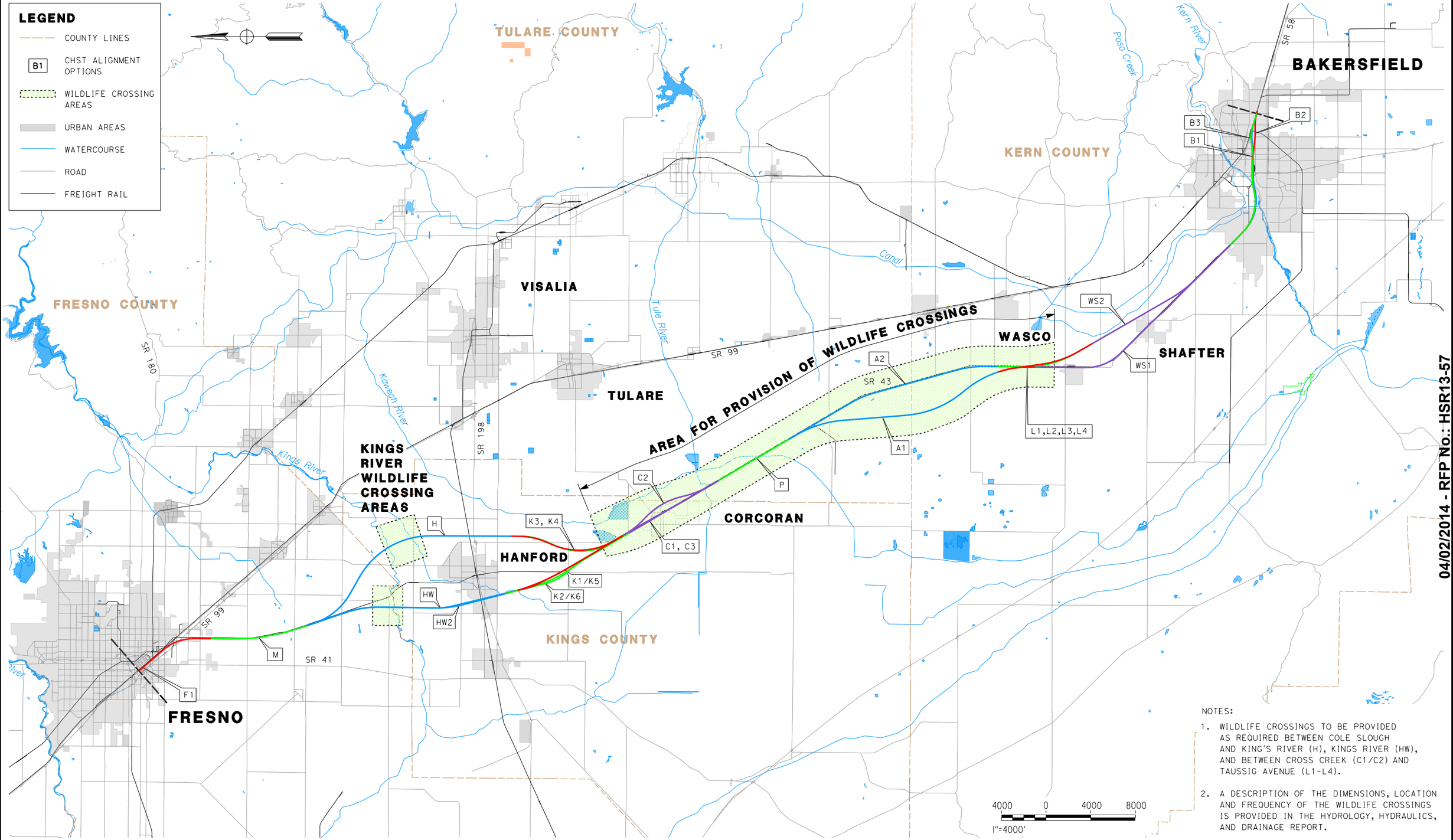
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALIGNMENT
CURVE DATA
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0013
SCALE NO SCALE
SHEET NO. 7 OF 8

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NOTES:

1. WILDLIFE CROSSINGS TO BE PROVIDED AS REQUIRED BETWEEN COLE SLOUGH AND KING'S RIVER (H), KINGS RIVER (HW), AND BETWEEN CROSS CREEK (C1/C2) AND TAUSSIG AVENUE (L1-L4).
2. A DESCRIPTION OF THE DIMENSIONS, LOCATION AND FREQUENCY OF THE WILDLIFE CROSSINGS IS PROVIDED IN THE HYDROLOGY, HYDRAULICS, AND DRAINAGE REPORT.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

WILDLIFE CROSSINGS LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0016
SCALE AS SHOWN
SHEET NO. 8 OF 8

04/02/2014 - RFP No.: HSR13-57

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

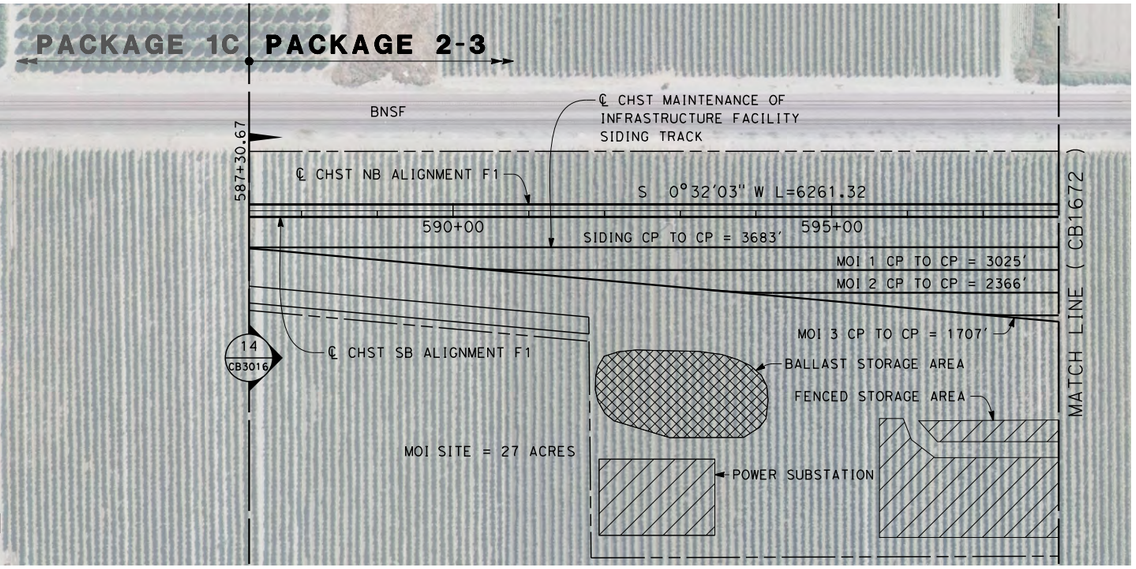
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
FRESNO SUBSECTION
ALIGNMENT F1
STA. 257+24 TO 627+07
KEY MAP

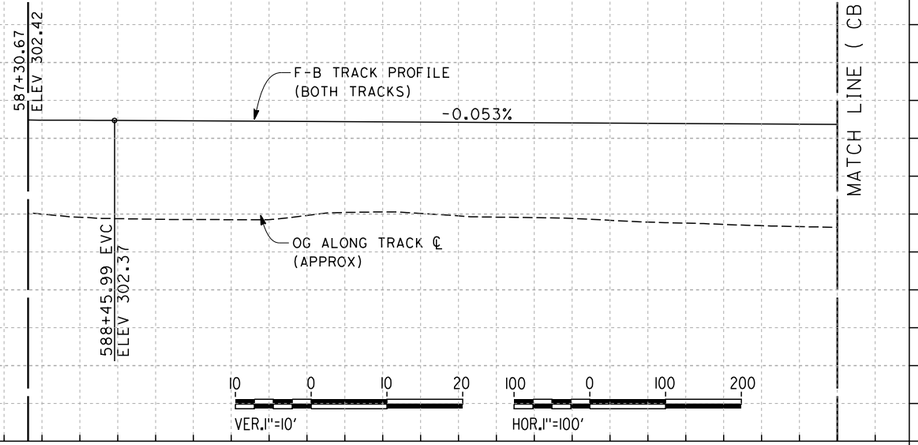
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DRAWING NO. CB1650
SCALE AS SHOWN
SHEET NO. 1 OF 24

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PLAN





PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

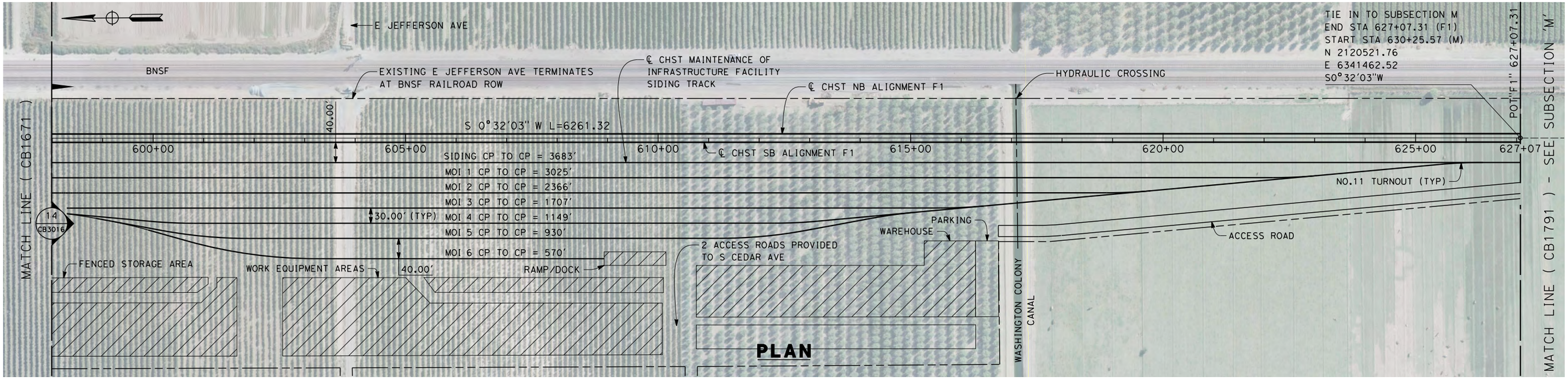
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
STA. 569+00 TO 598+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1671
SCALE AS SHOWN
SHEET NO. 16 OF 24

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

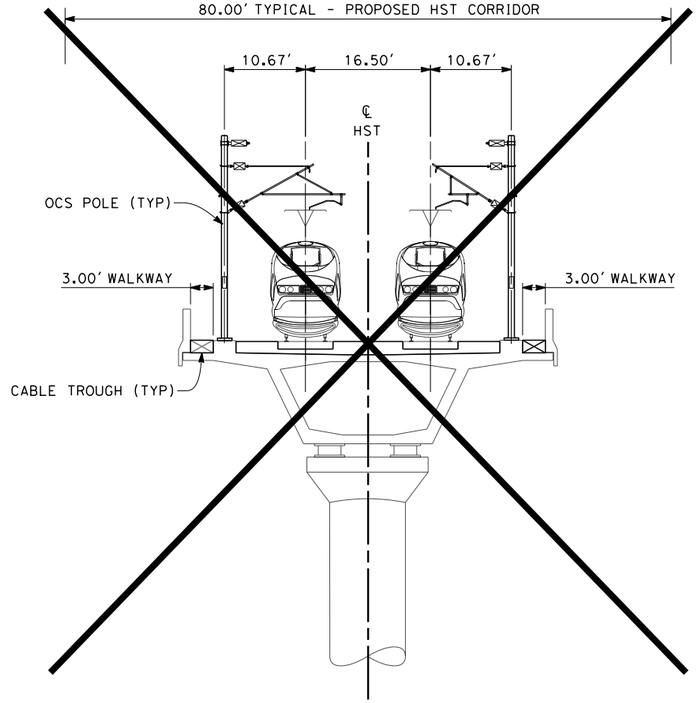
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
STA. 598+00 TO 627+07
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1672
SCALE AS SHOWN
SHEET NO. 17 OF 24

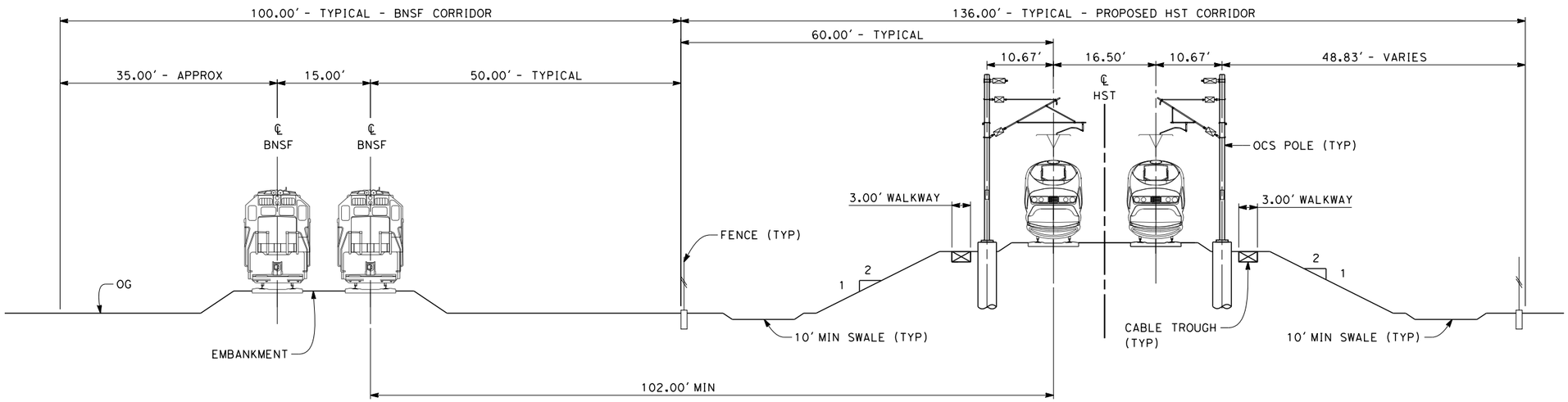
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SECTION 13

TWIN TRACK - AERIAL VIADUCT
STA 442+62 THROUGH STA 478+75
STA 487+26 THROUGH STA 503+30



SECTION 14

TWIN TRACK ADJACENT TO SINGLE TRACK BNSF
STA 544+35 THROUGH STA 627+07

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE.
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS.
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

FRESNO SUBSECTION
ALIGNMENT F1
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3016
SCALE AS SHOWN
SHEET NO. 24 OF 24

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

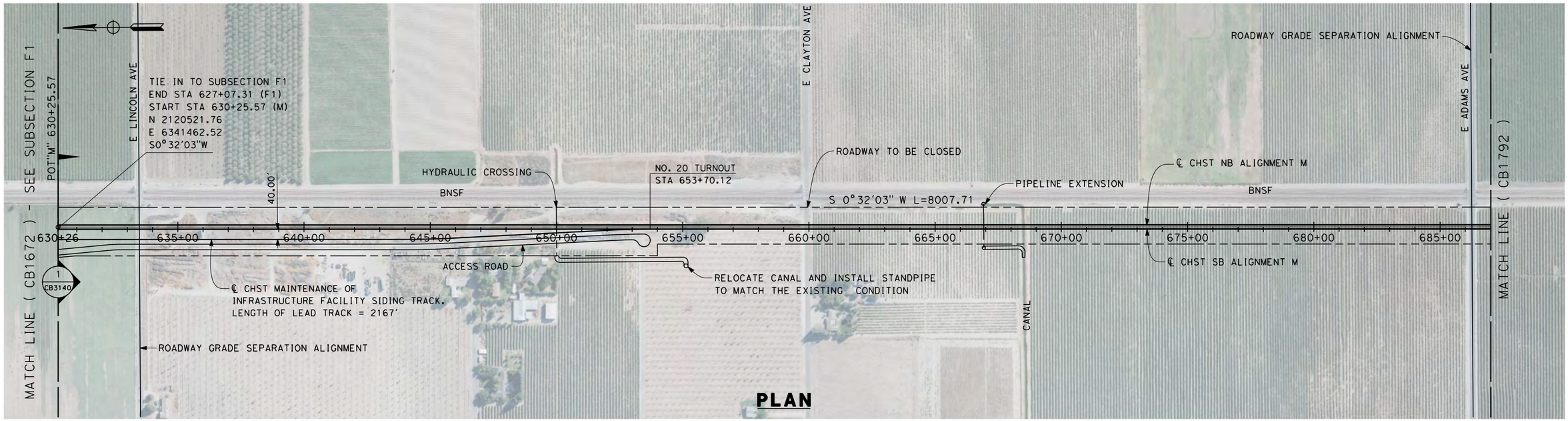
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 630+26 TO 1065+07
KEY MAP

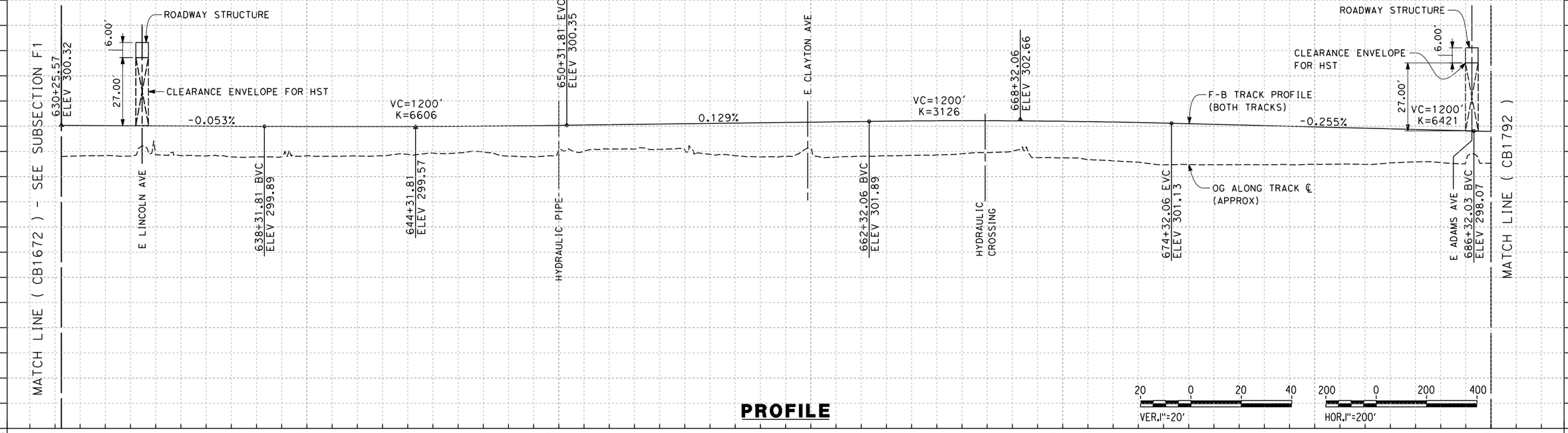
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1790
SCALE AS SHOWN
SHEET NO. 1 OF 11

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

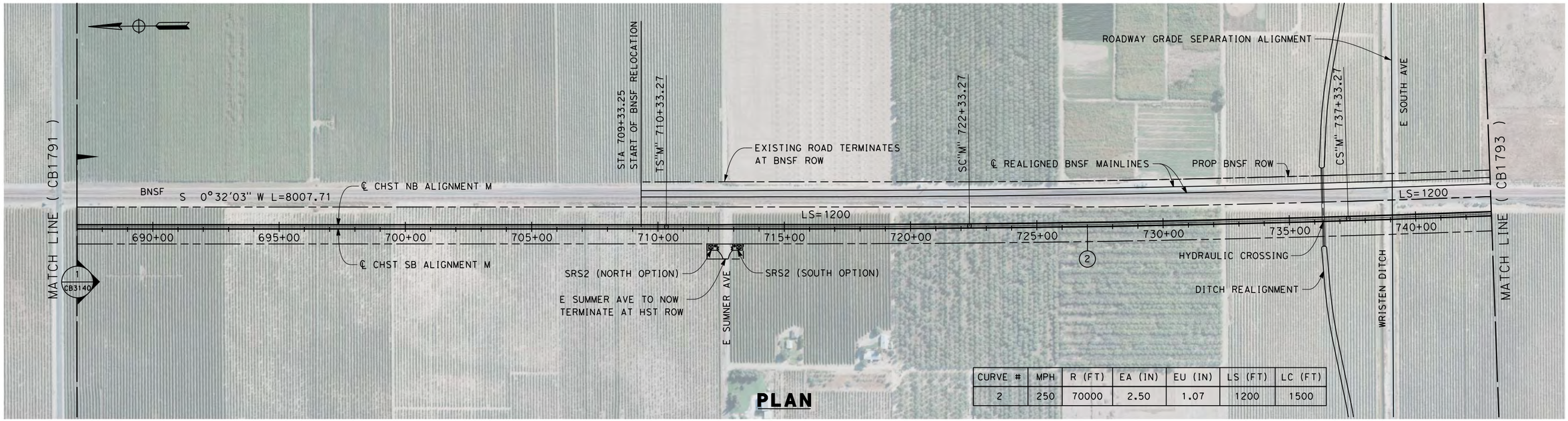
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 630+26 TO 687+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1791
SCALE AS SHOWN
SHEET NO. 2 OF 11

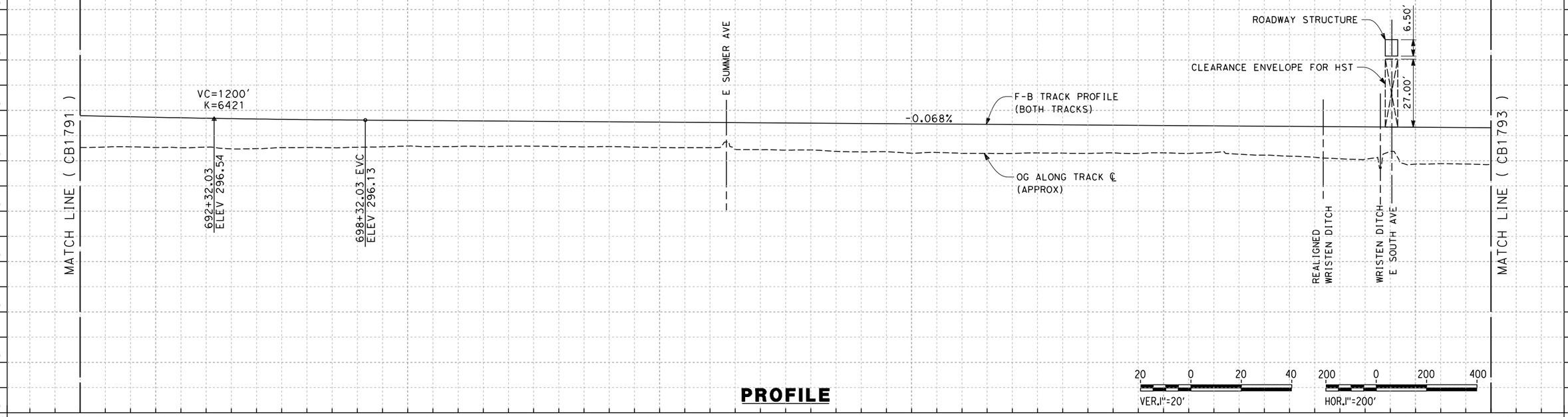
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
2	250	70000	2.50	1.07	1200	1500

PLAN



PROFILE

STATION	687+00	690+00	700+00	710+00	720+00	730+00	740+00	743+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

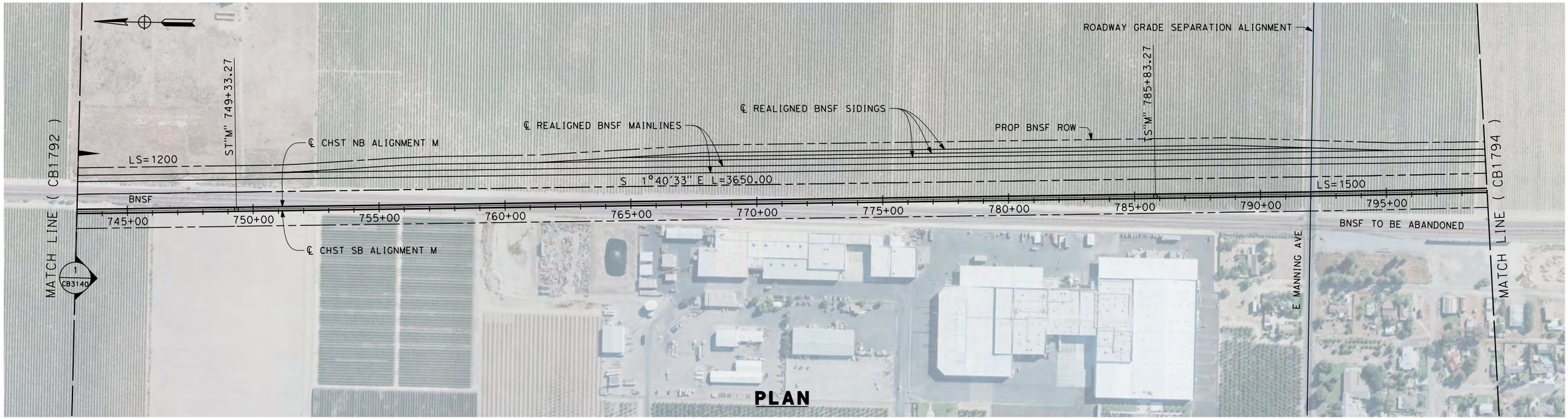
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
STA. 687+00 TO 743+00
PLAN AND PROFILE

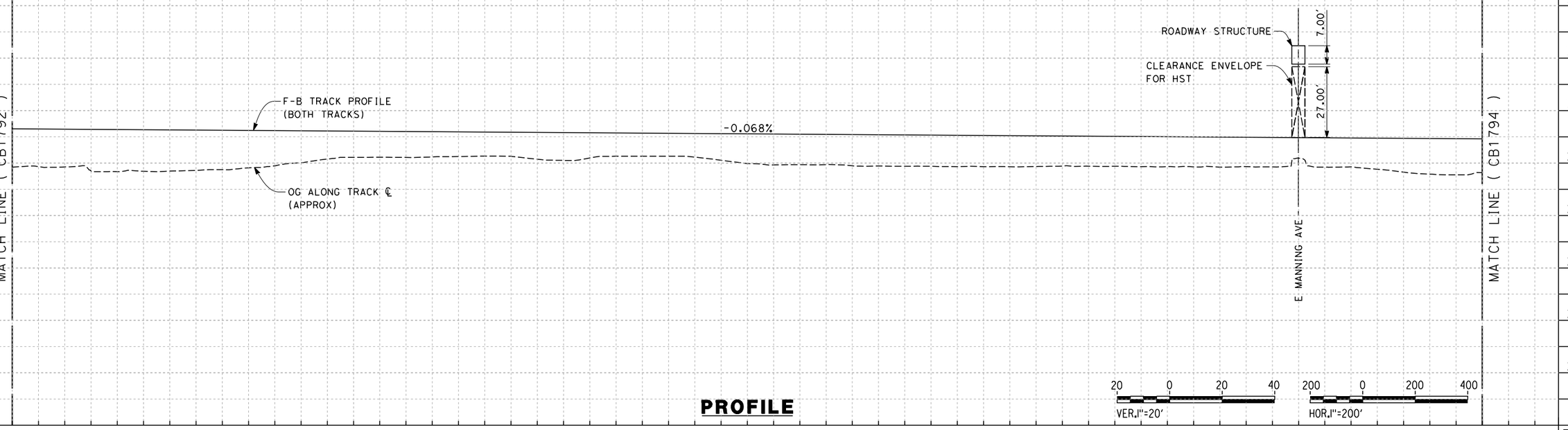
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DRAWING NO. CB1792
SCALE AS SHOWN
SHEET NO. 3 OF 11

RFP No.: HSR13-57
04/02/2014

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

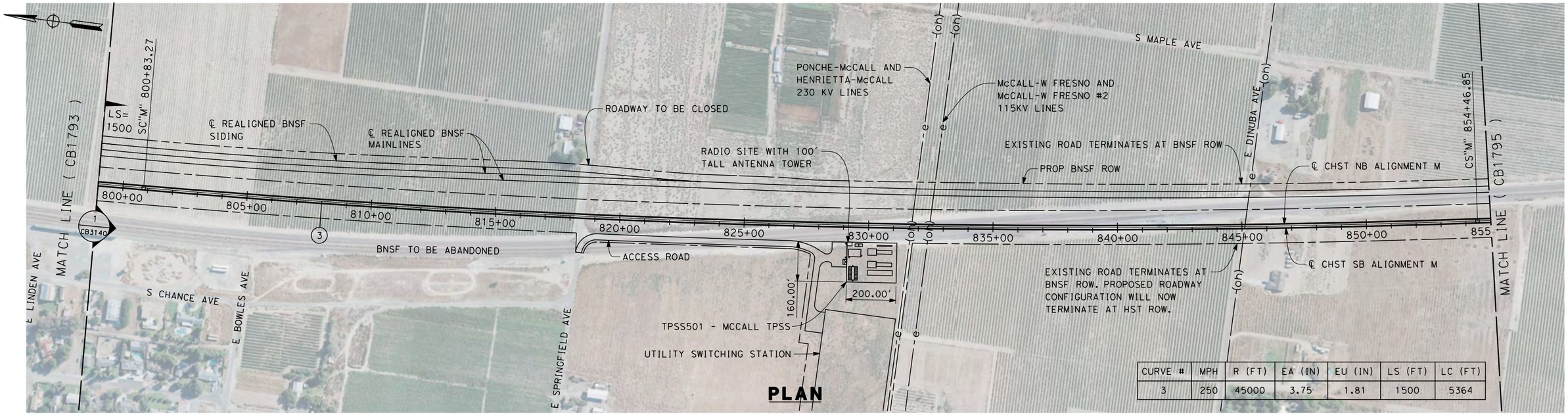
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 743+00 TO 799+00
PLAN AND PROFILE

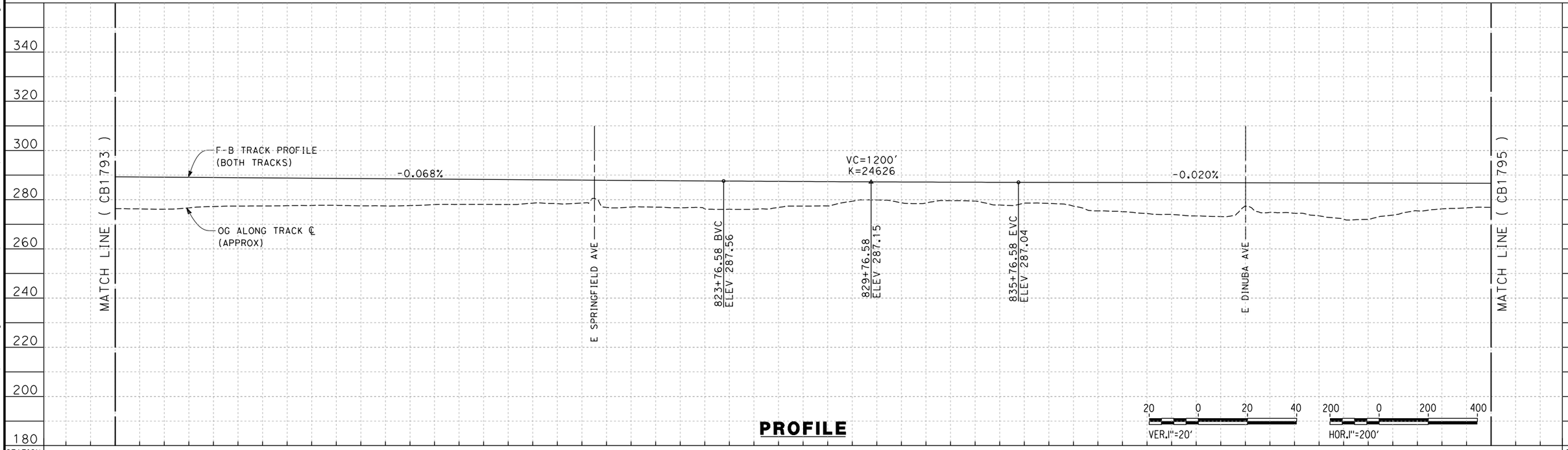
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SHEET NO. 4 OF 11

04/02/2014 - RFP No.: HSR13-57

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
3	250	45000	3.75	1.81	1500	5364



STATION	799+00	810+00	820+00	830+00	840+00	850+00	855+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

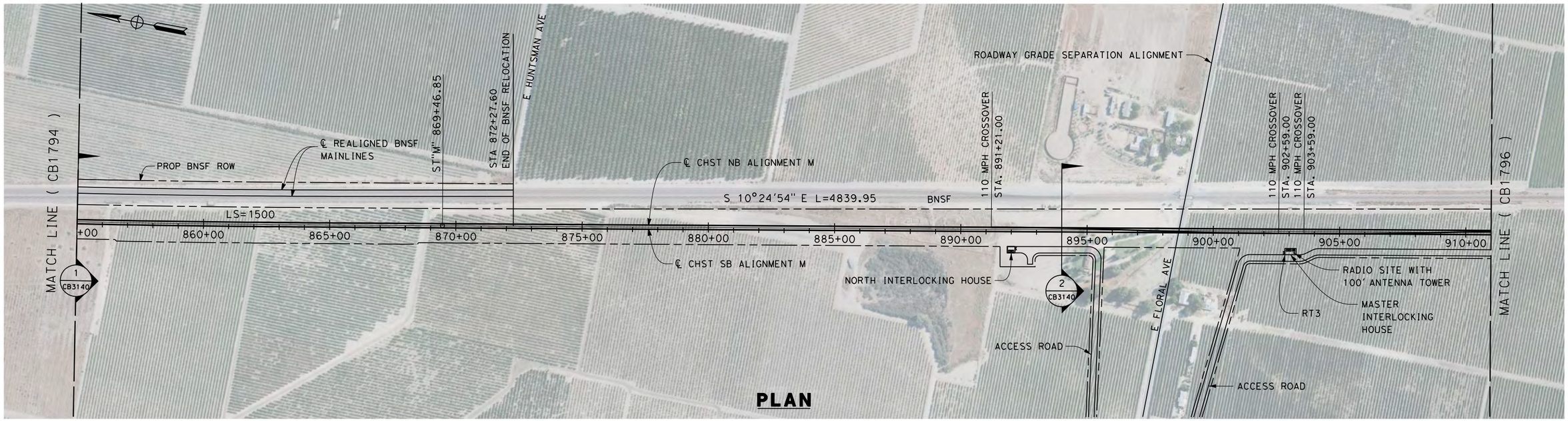
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 799+00 TO 855+00
PLAN AND PROFILE

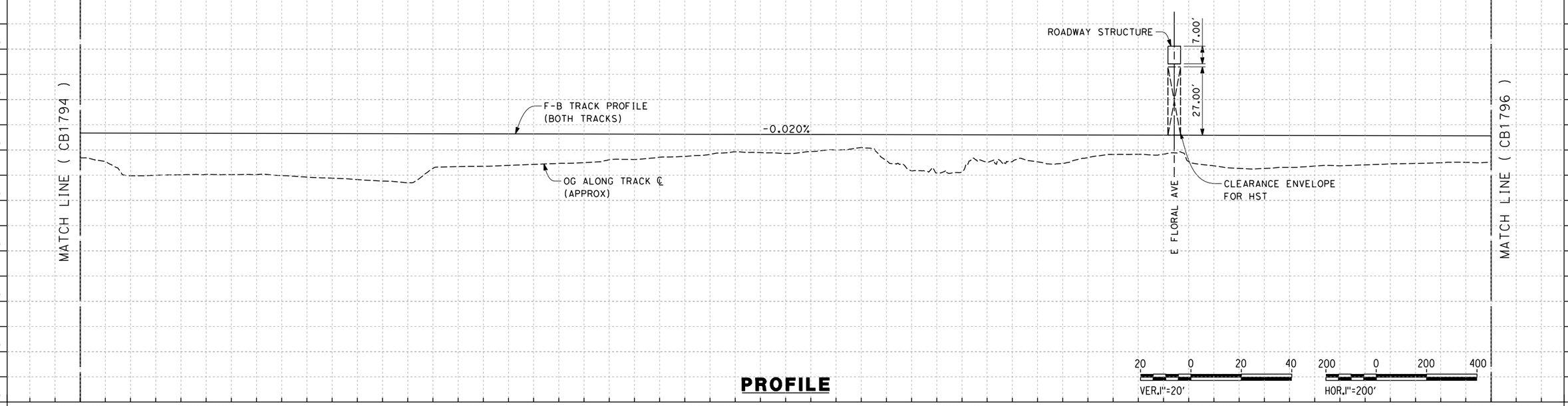
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DRAWING NO. CB1794
SCALE AS SHOWN
SHEET NO. 5 OF 11

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

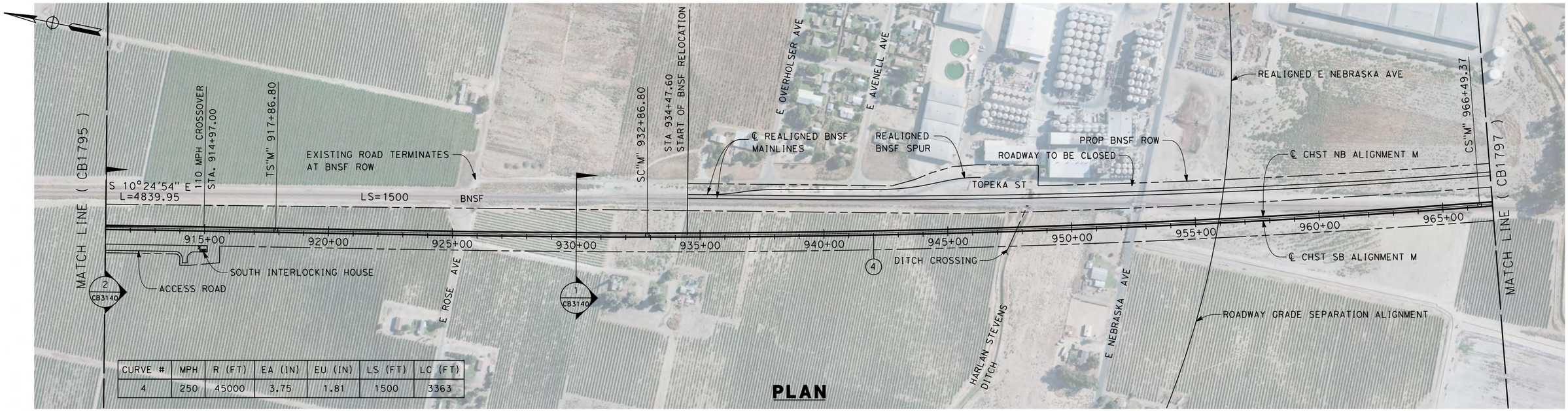
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 855+00 TO 911+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1795
SCALE AS SHOWN
SHEET NO. 6 OF 11

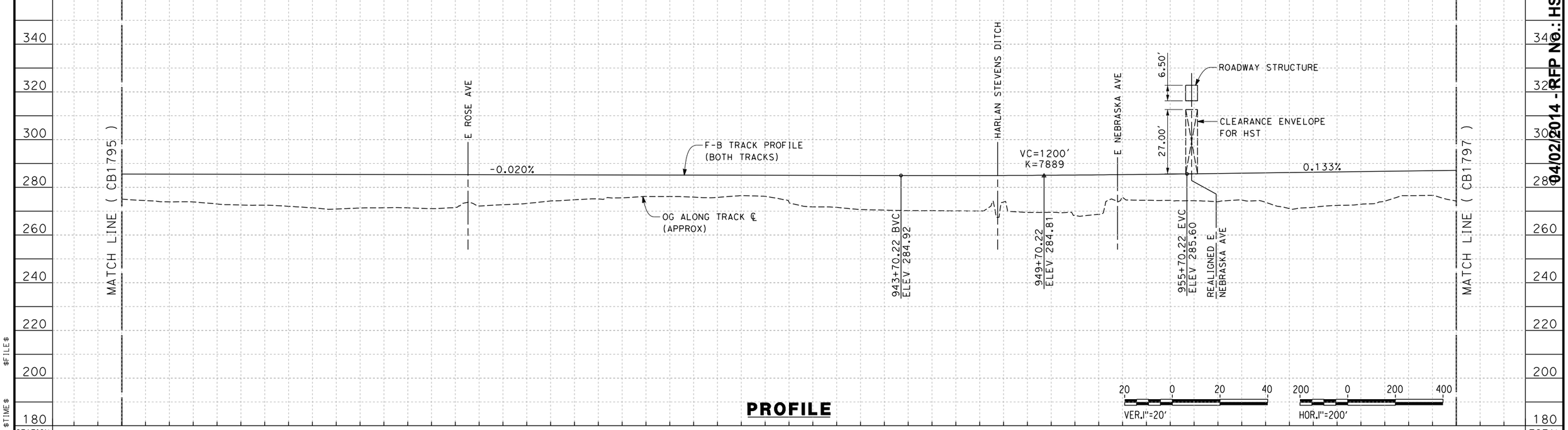
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
4	250	45000	3.75	1.81	1500	3363

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

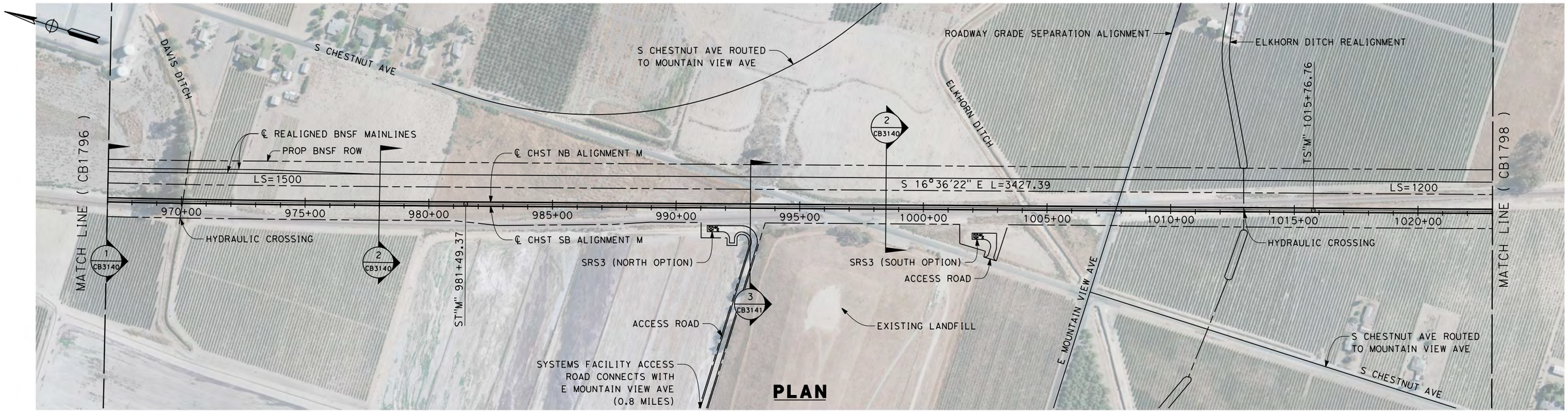
CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 911+00 TO 967+00
PLAN AND PROFILE

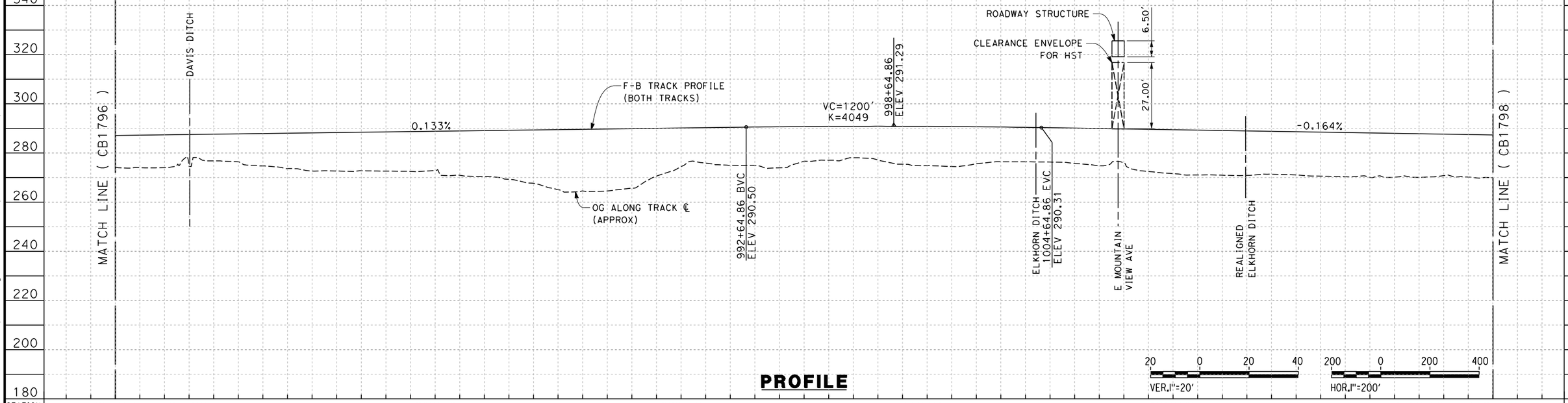
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1796
SCALE AS SHOWN
SHEET NO. 7 OF 11

$FILE$ $TIME$ $DATE$ $USER$

04/02/2014 - RFP No.: HSR13-57



PLAN



PROFILE

STATION	967+00	970+00	980+00	990+00	1000+00	1010+00	1020+00	1023+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

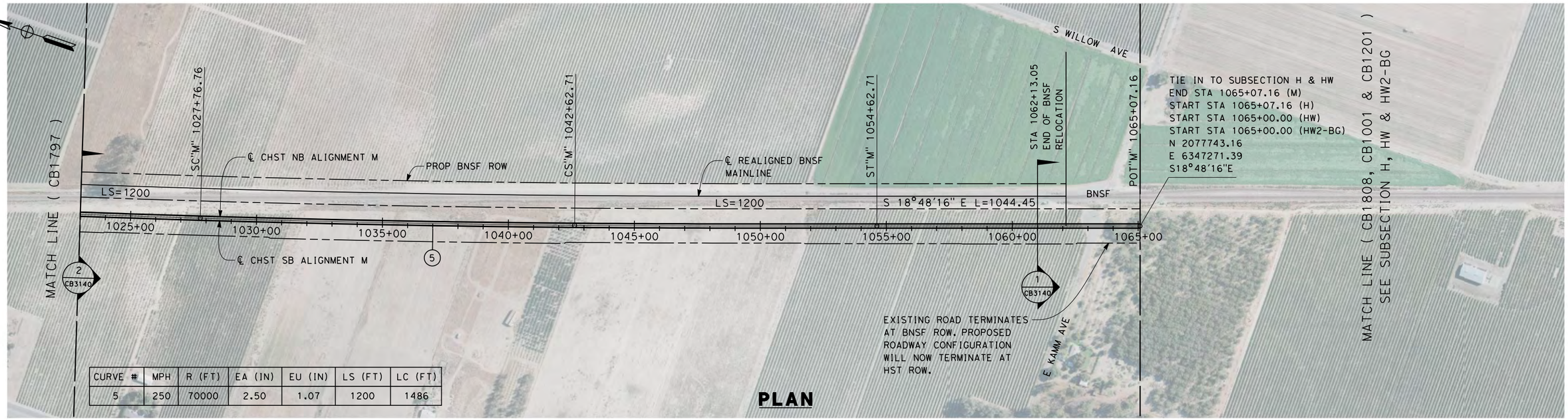
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
STA. 967+00 TO 1023+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1797
SCALE AS SHOWN
SHEET NO. 8 OF 11

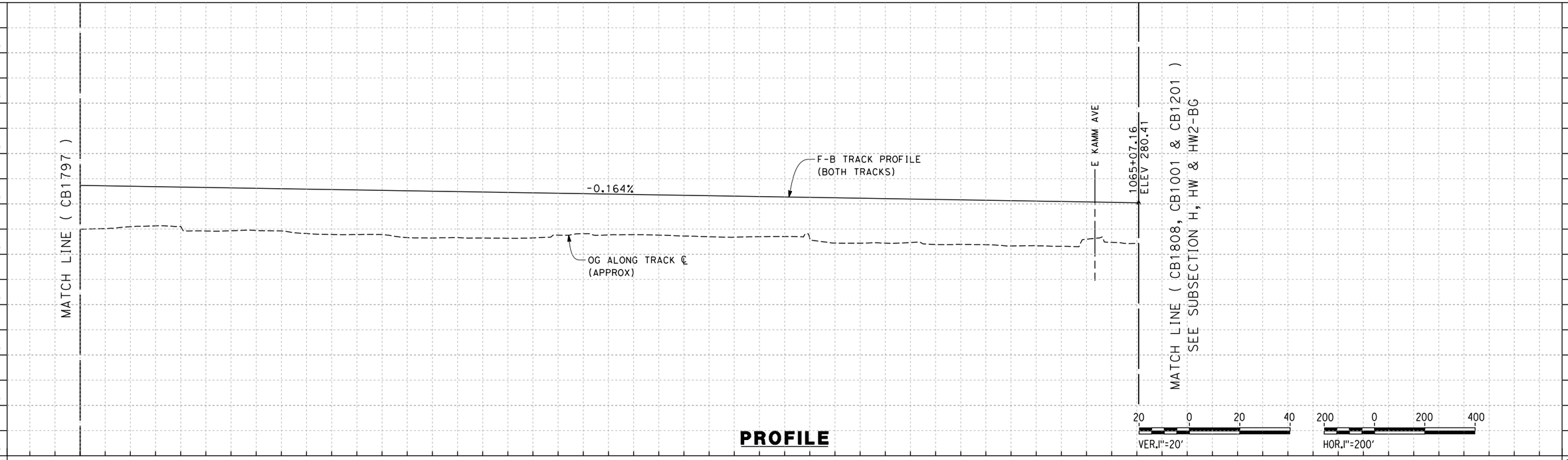
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
5	250	70000	2.50	1.07	1200	1486

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

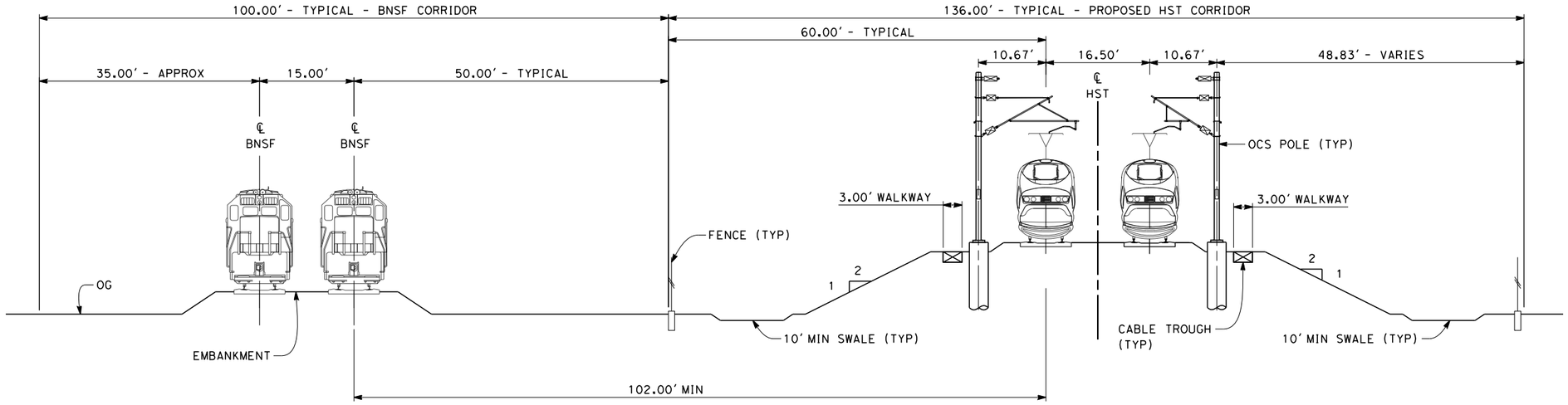
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
STA. 1023+00 TO 1065+07
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1798
SCALE AS SHOWN
SHEET NO. 9 OF 11

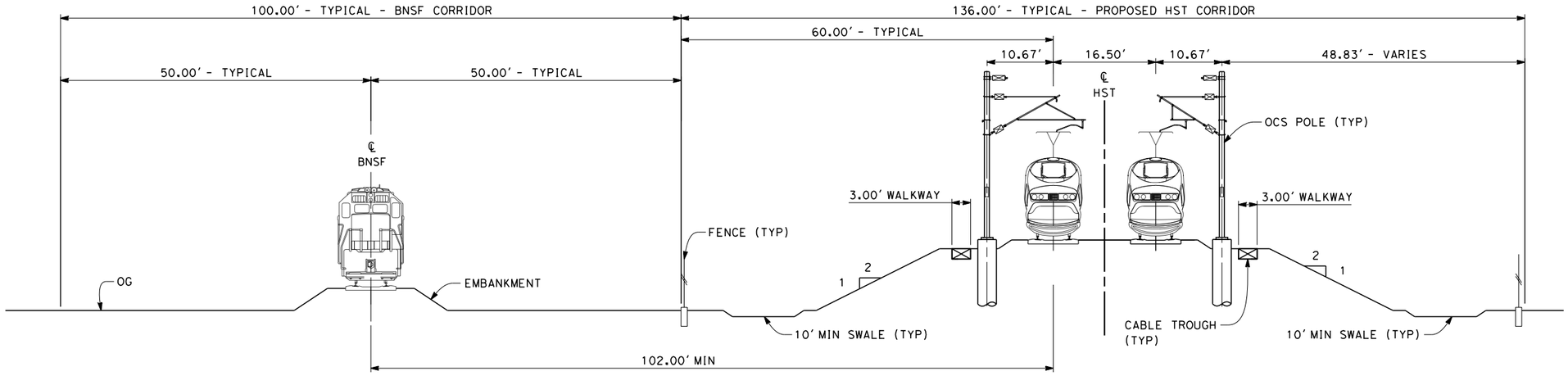
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SECTION 1

TWIN TRACK ADJACENT TO BNSF - EMBANKMENT WITH OPEN DRAINAGE
STA 630+26 THROUGH STA 894+00
STA 930+00 THROUGH STA 978+00
STA 1061+00 THROUGH STA 1065+07



SECTION 2

TWIN TRACK ADJACENT TO BNSF - EMBANKMENT WITH OPEN DRAINAGE
STA 894+00 THROUGH STA 930+00
STA 978+00 THROUGH STA 993+00
STA 998+40 THROUGH STA 1061+00

10 0 10 20
1"=10'

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.
3. FOR EXTENTS OF BNSF REALIGNED TRACKS, SEE PLAN SHEETS.

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

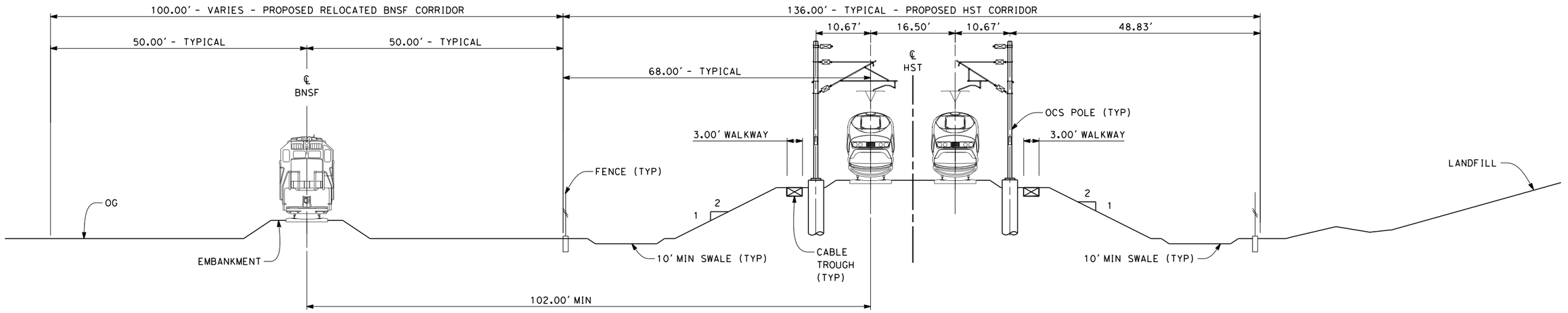
MONMOUTH SUBSECTION
ALIGNMENT M
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3140
SCALE AS SHOWN
SHEET NO. 10 OF 11

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.
3. FOR EXTENTS OF BNSF REALIGNED TRACKS, SEE PLAN SHEETS.



SECTION 3

TWIN TRACK - BETWEEN LANDFILL AND REALIGNED BNSF - EMBANKMENT WITH OPEN DRAINAGE
STA 993+00 THROUGH STA 998+40

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3141
SCALE AS SHOWN
SHEET NO. 11 OF 11

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04/02/2014 - RFP No.: HSR13-57

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eron.sudhausen

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

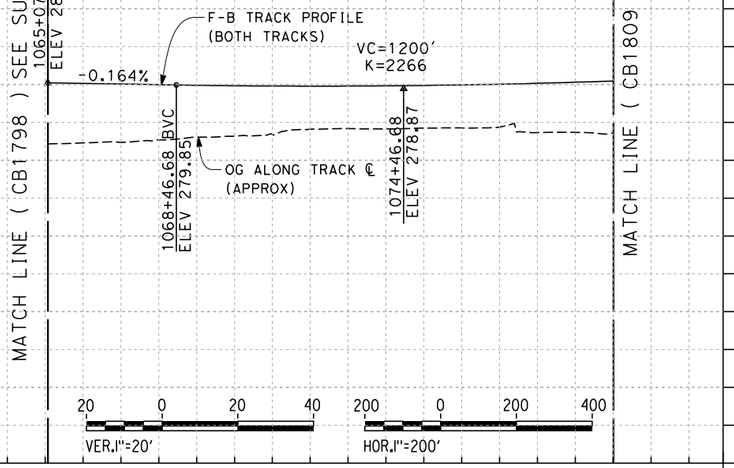
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1065+07 TO 2144+63
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1800
SCALE AS SHOWN
SHEET NO. 1 OF 31



PLAN



PROFILE

STATION	1065+07	1070+00	1080+00	TOTAL
CY Exc				
CY Emb				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

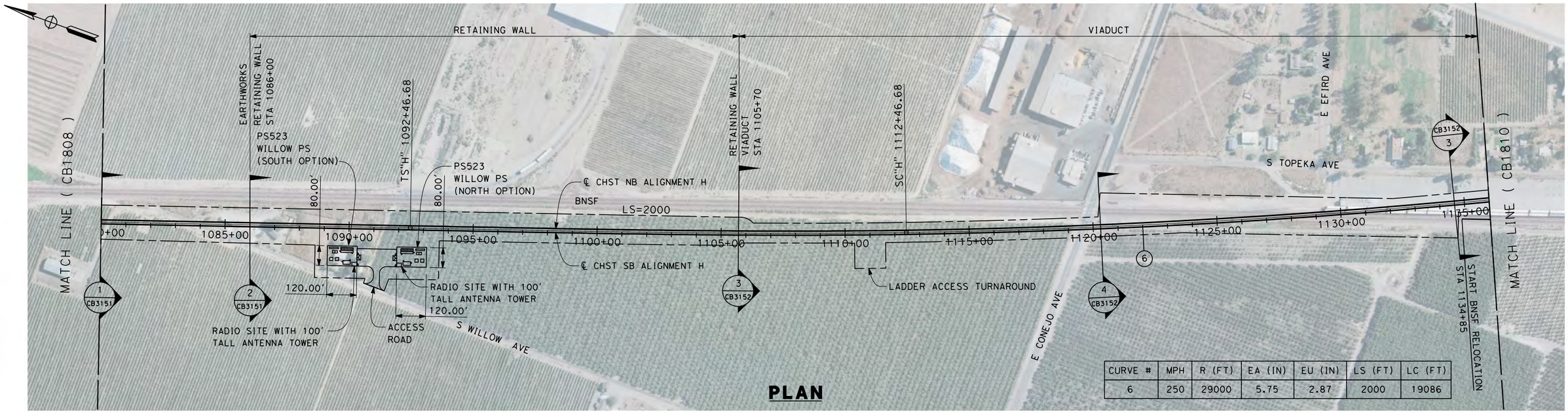
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1065+07 TO 1080+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1808
SCALE AS SHOWN
SHEET NO. 2 OF 31

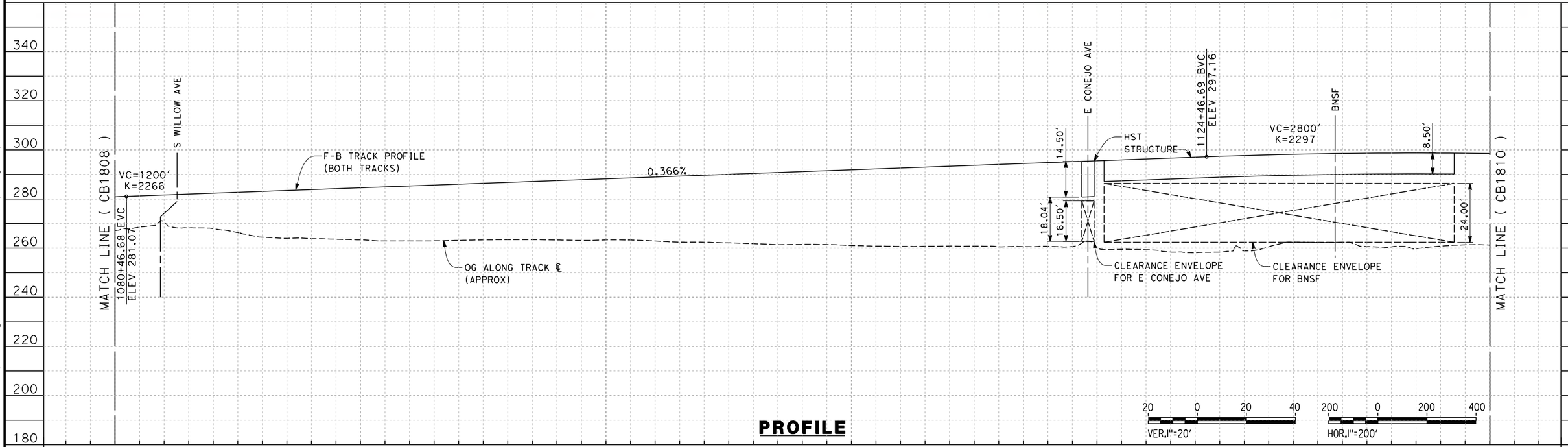
04/02/2014 - RFP No.: HSR13-57

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
6	250	29000	5.75	2.87	2000	19086

PLAN



PROFILE

STATION	1080+00	1090+00	1100+00	1110+00	1120+00	1130+00	1136+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

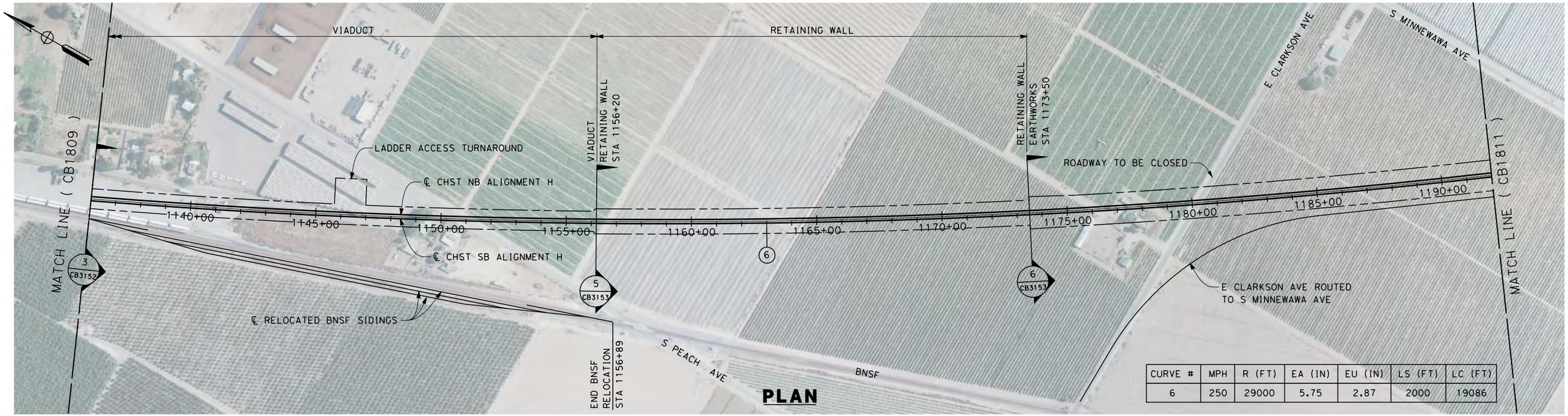
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1080+00 TO 1136+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1809
SCALE AS SHOWN
SHEET NO. 3 OF 31

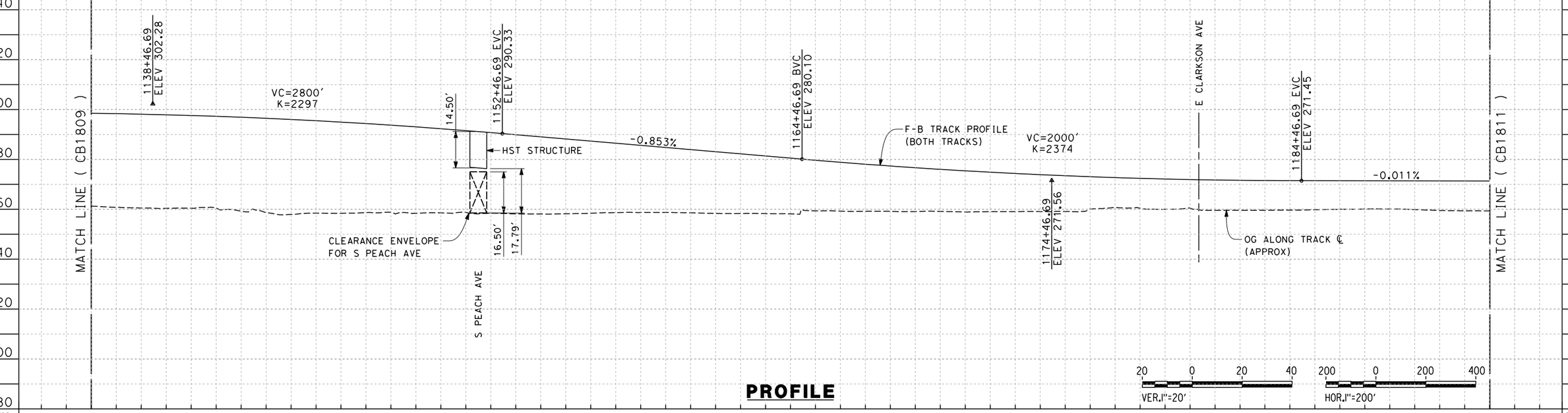
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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
6	250	29000	5.75	2.87	2000	19086



PROFILE

STATION	1136+00	1140+00	1150+00	1160+00	1170+00	1180+00	1190+00	1192+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

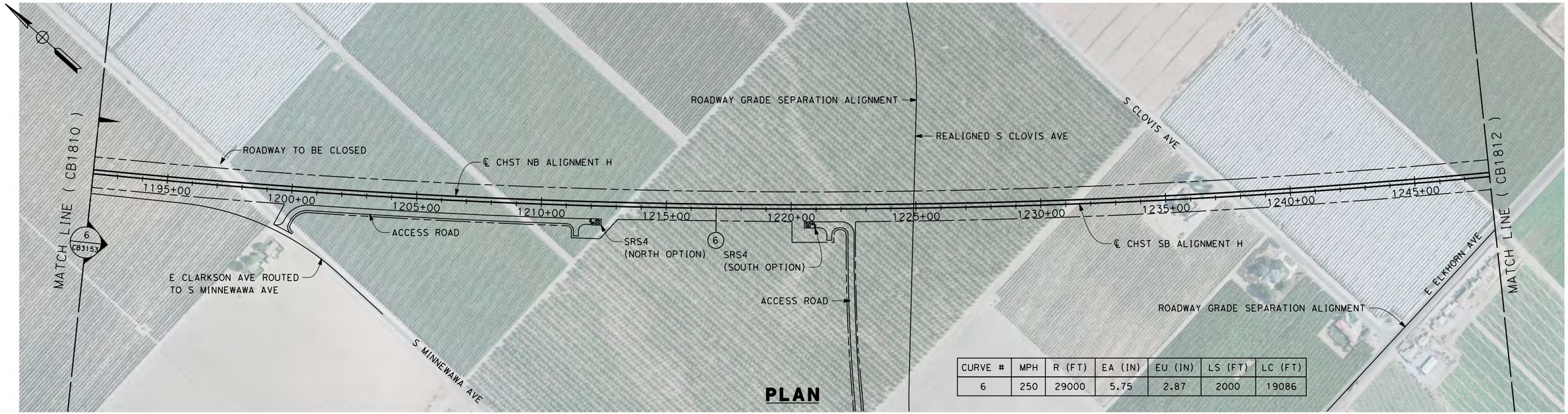
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1136+00 TO 1192+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1810
SCALE AS SHOWN
SHEET NO. 4 OF 31

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

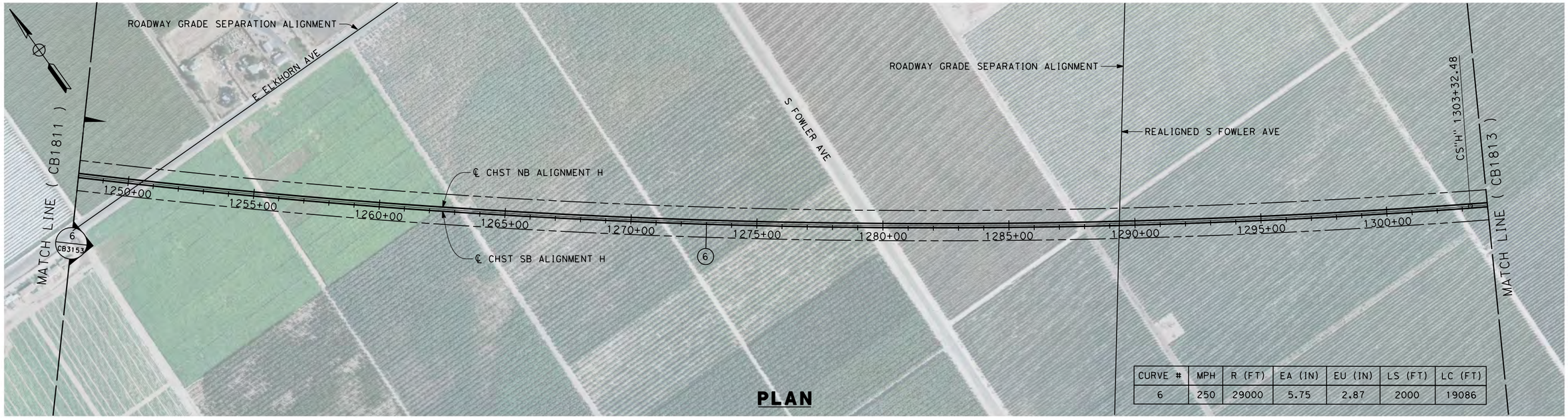
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1192+00 TO 1248+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1811
SCALE AS SHOWN
SHEET NO. 5 OF 31

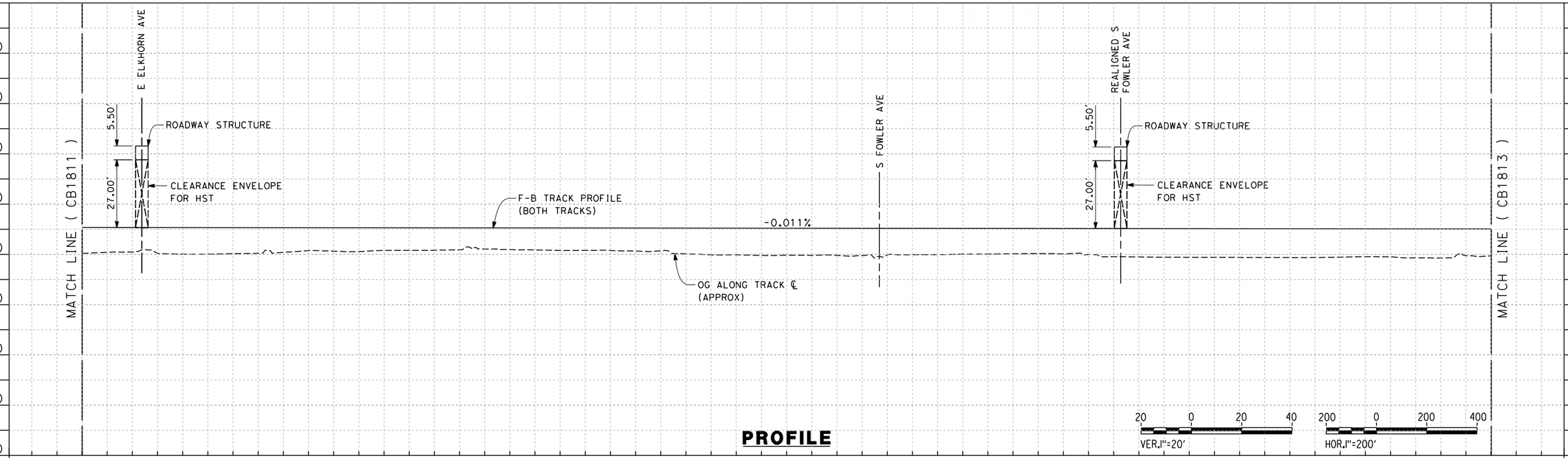
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
6	250	29000	5.75	2.87	2000	19086

PLAN



PROFILE

STATION	1248+00	1250+00	1260+00	1270+00	1280+00	1290+00	1300+00	1304+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

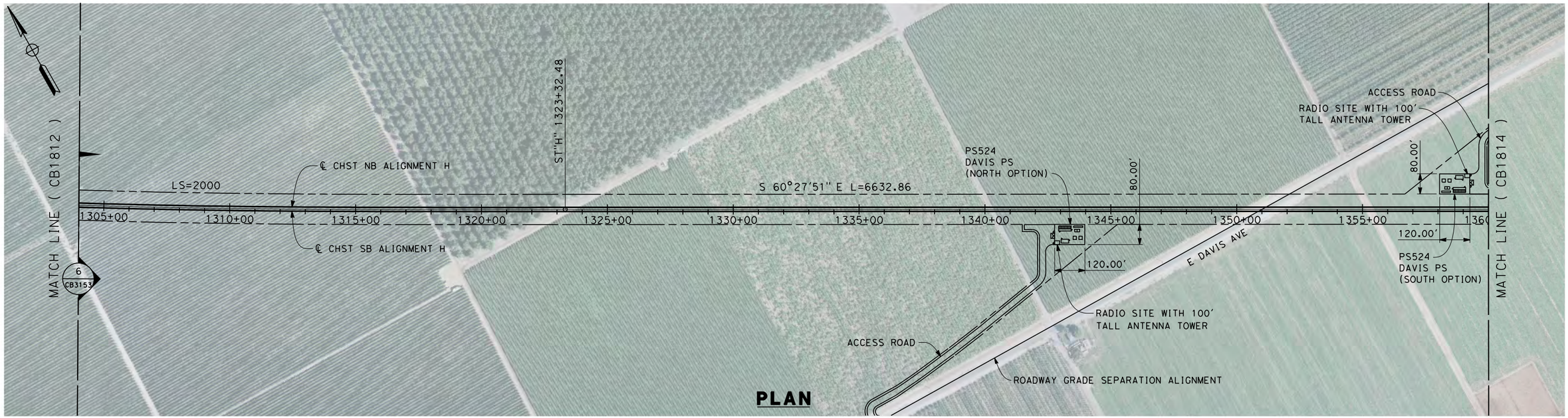
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA 1248+00 TO 1304+00
PLAN AND PROFILE

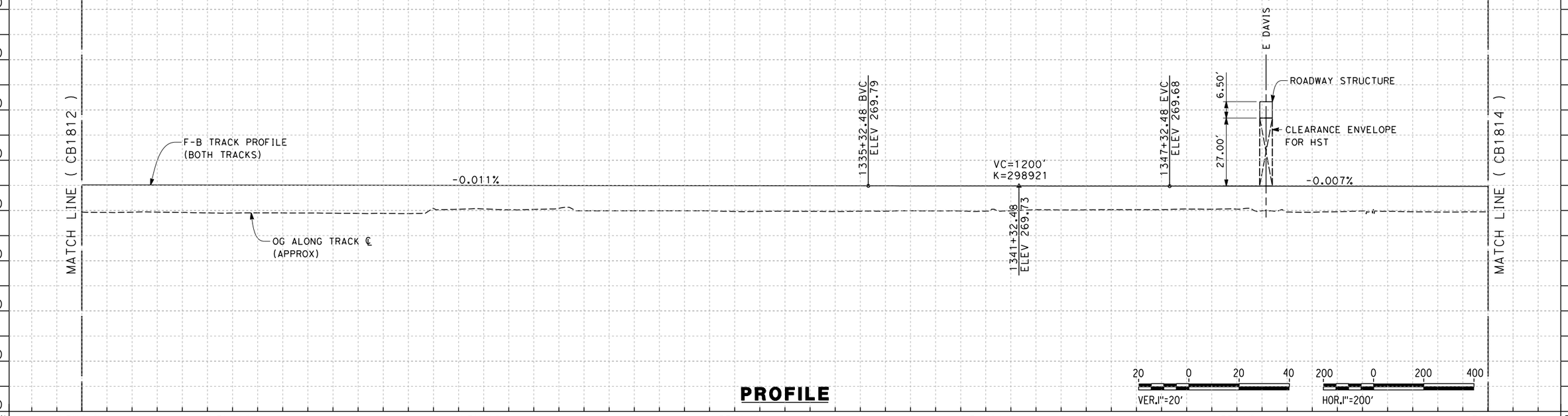
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1812
SCALE AS SHOWN
SHEET NO. 6 OF 31

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	1304+00	1310+00	1320+00	1330+00	1340+00	1350+00	1360+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

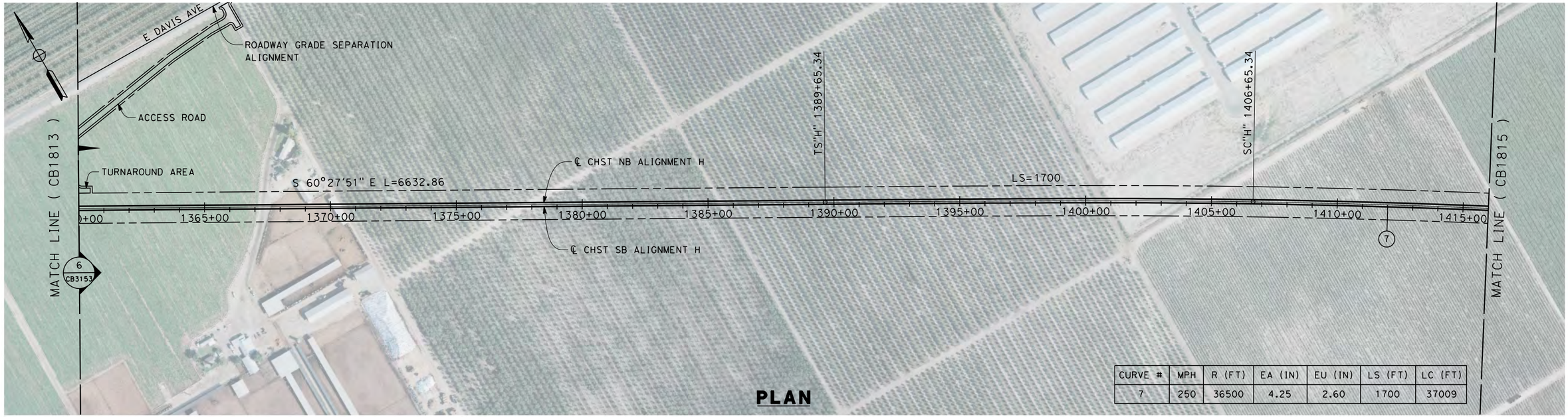
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1304+00 TO 1360+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1813
SCALE AS SHOWN
SHEET NO. 7 OF 31

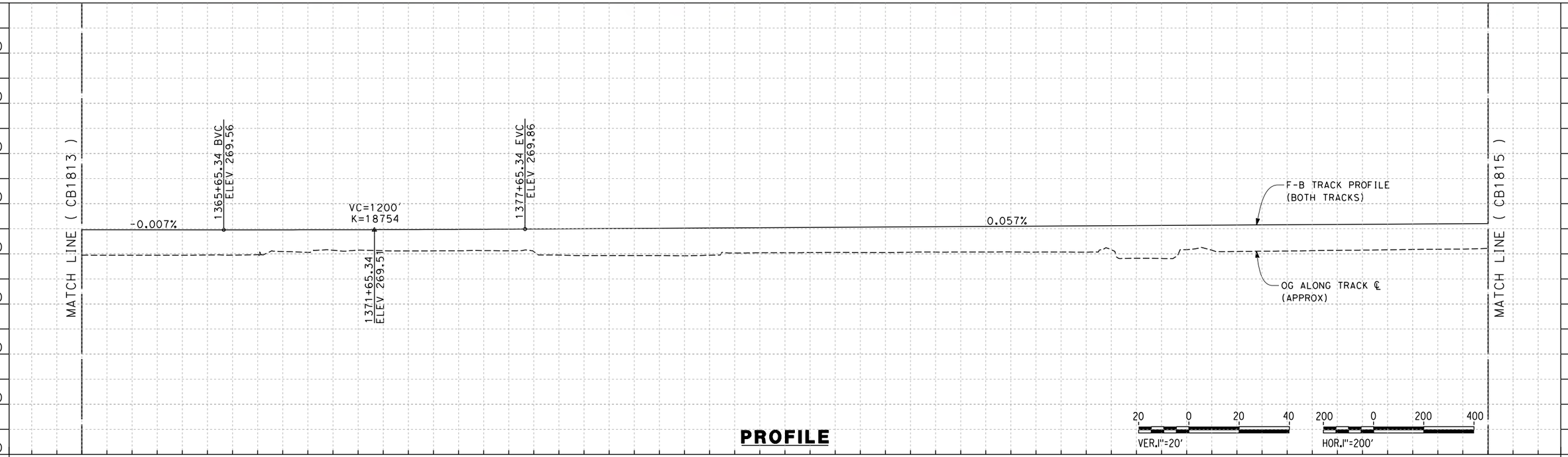
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009

PLAN



PROFILE

STATION	1360+00	1370+00	1380+00	1390+00	1400+00	1410+00	1416+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

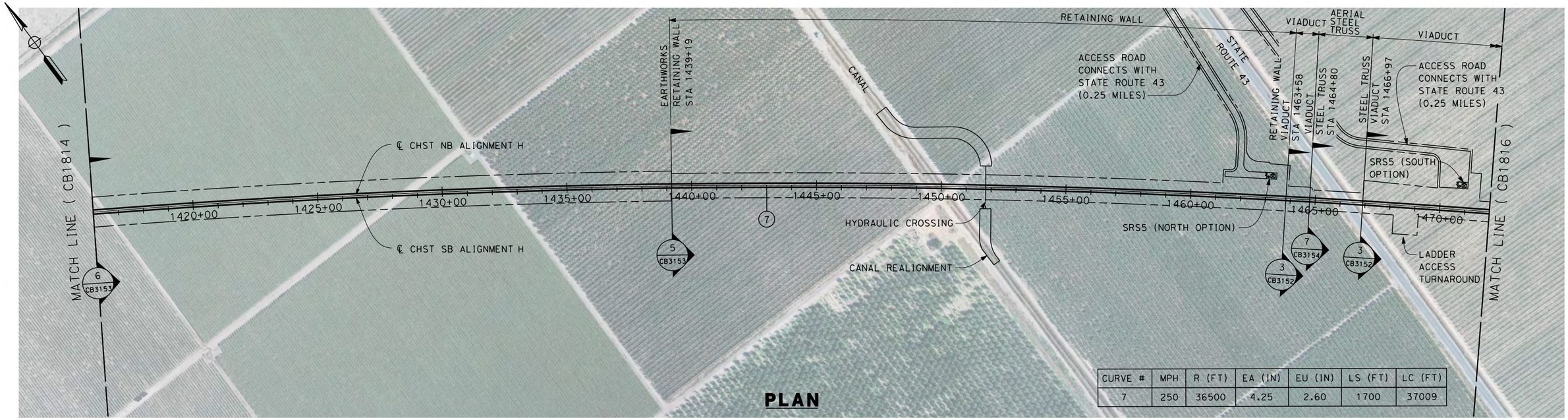
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1360+00 TO 1416+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1814
SCALE AS SHOWN
SHEET NO. 8 OF 31

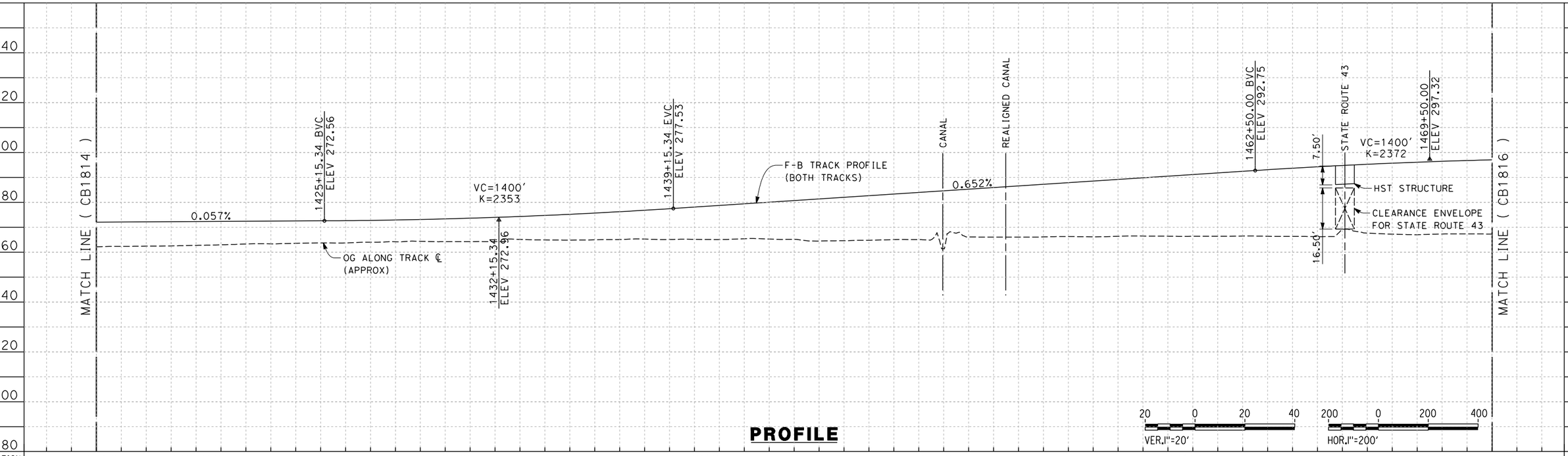
04/02/2014 - RFP No.: HSR13-57

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

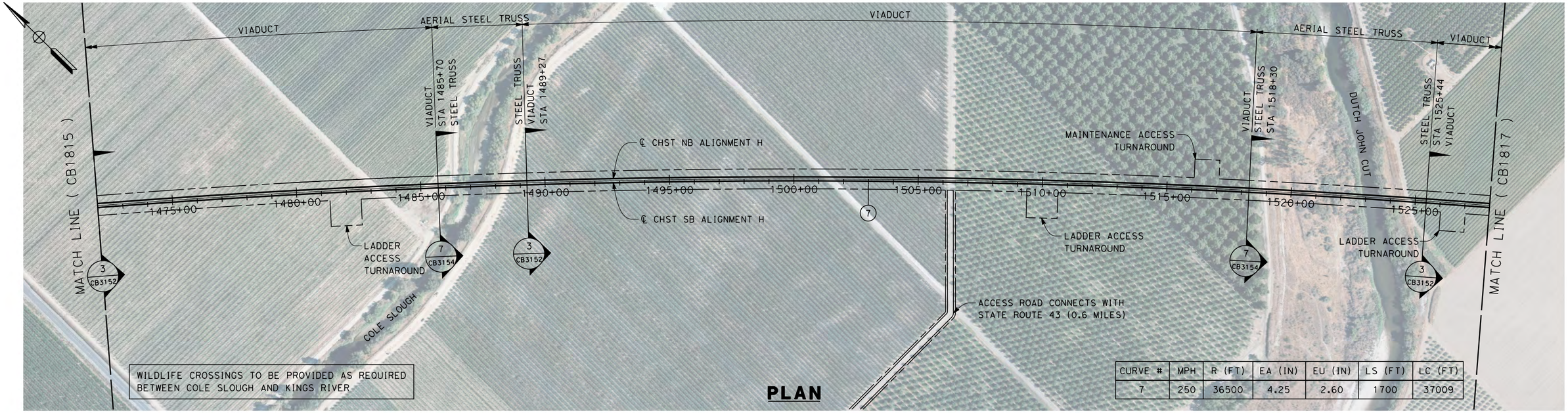
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1416+00 TO 1472+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1815
SCALE AS SHOWN
SHEET NO. 9 OF 31

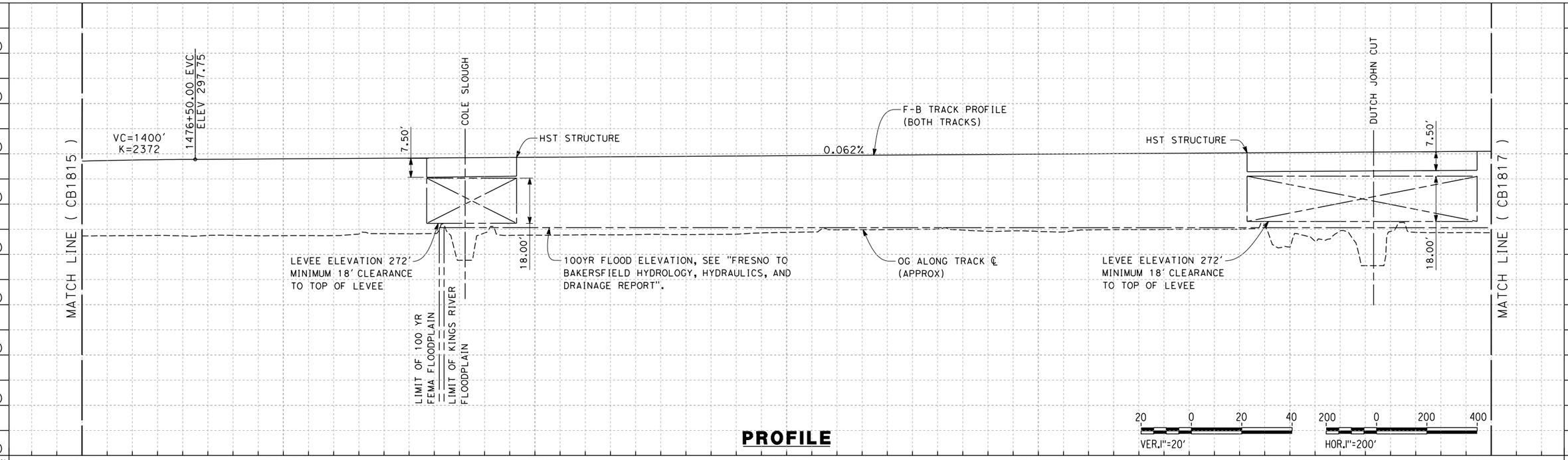
RFP No.: HSR13-57
04/02/2014

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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009



PROFILE

STATION	1472+00	1480+00	1490+00	1500+00	1510+00	1520+00	1528+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

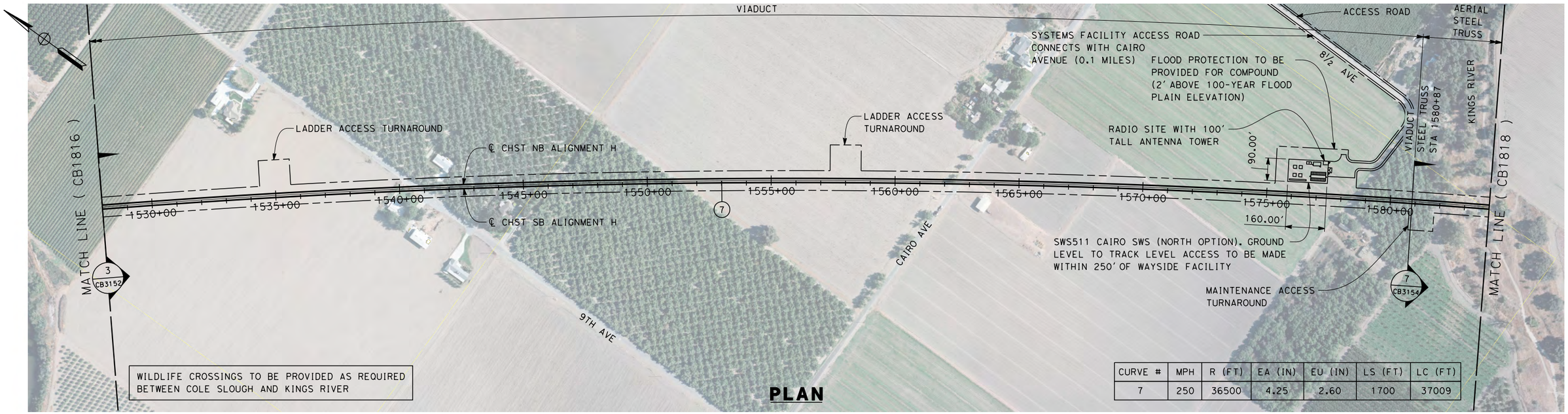
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1472+00 TO 1528+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1816
SCALE AS SHOWN
SHEET NO. 10 OF 31

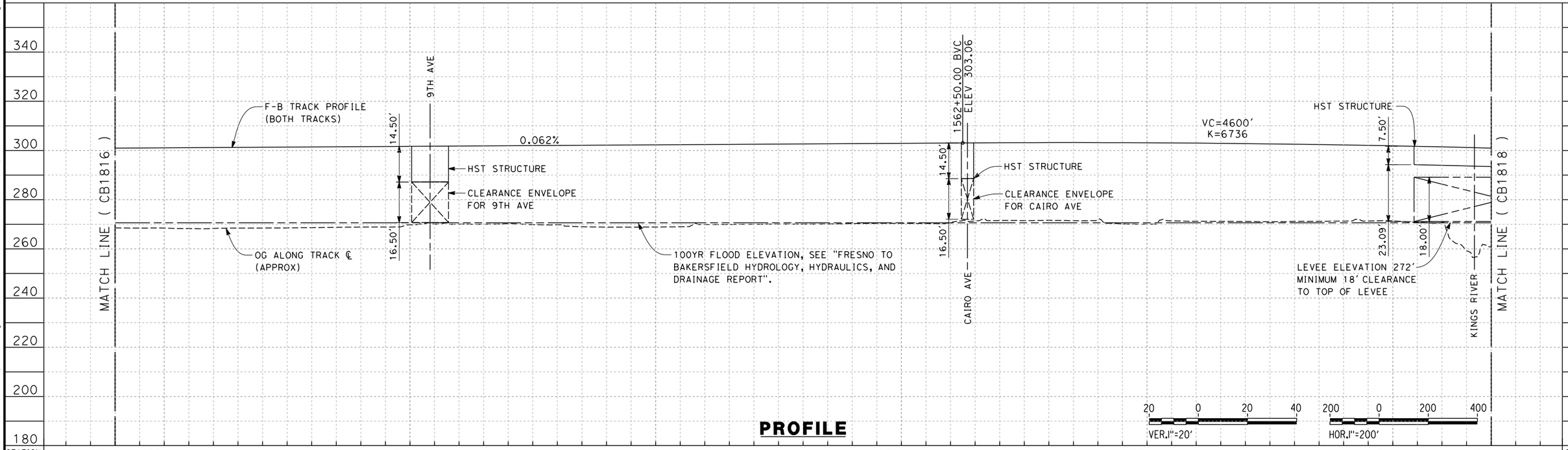
RFP No.: HSR13-57 - 04/02/2014

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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

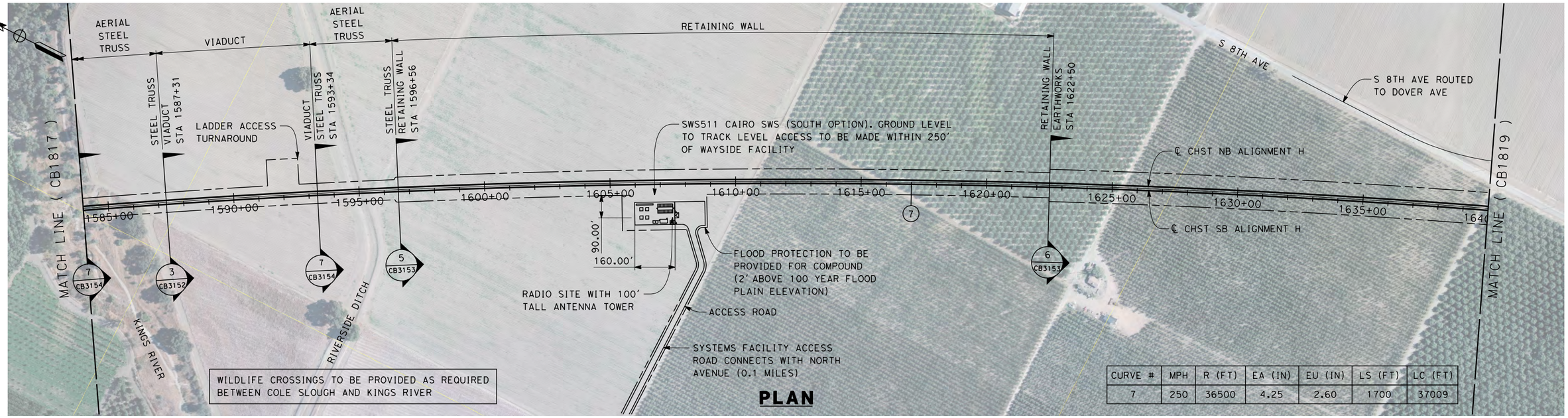
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA.1528+00 TO 1584+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1817
SCALE AS SHOWN
SHEET NO. 11 OF 31

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHES
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

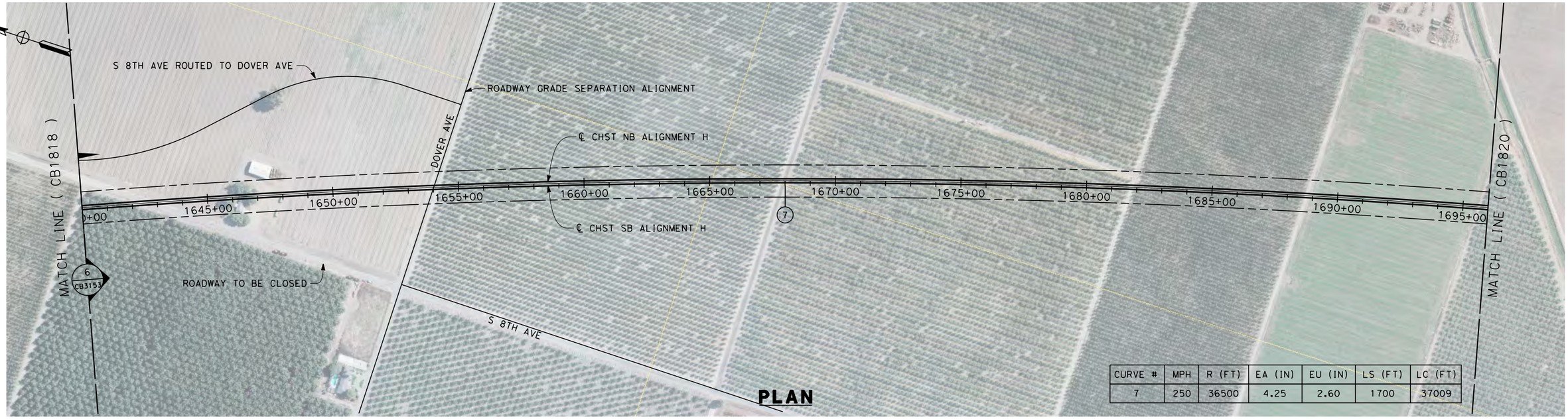
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1584+00 TO 1640+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1818
SCALE AS SHOWN
SHEET NO. 12 OF 31

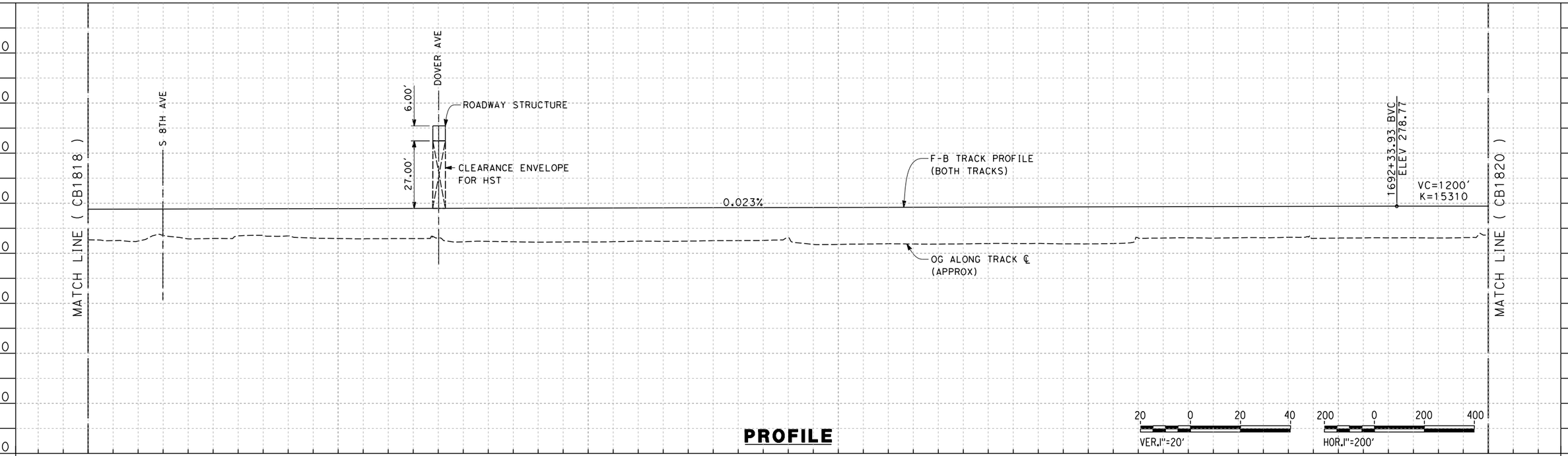
RFP No.: HSR13-57
04/02/2014

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Nadine.Hutton



CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009

PLAN



PROFILE

STATION	1640+00	1650+00	1660+00	1670+00	1680+00	1690+00	1696+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

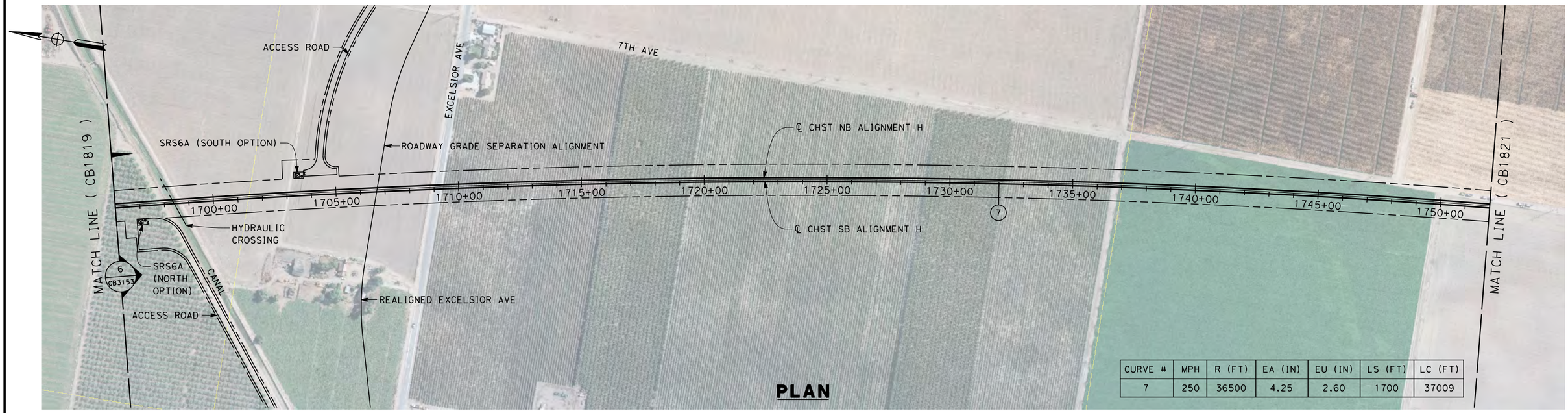
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1640+00 TO 1696+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1819
SCALE AS SHOWN
SHEET NO. 13 OF 31

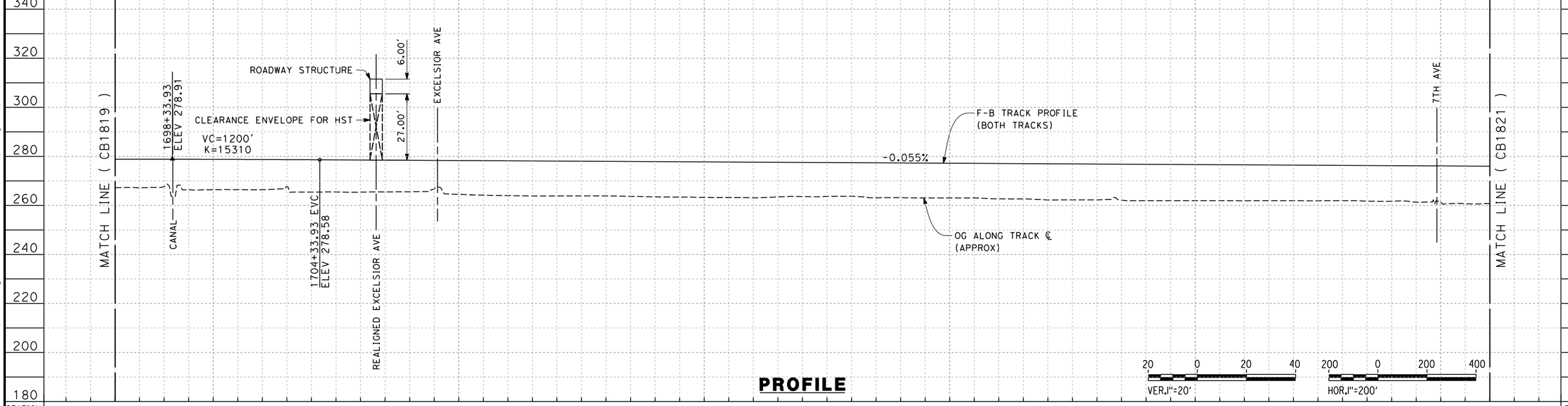
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009

PLAN



PROFILE

STATION	1696+00	1700+00	1710+00	1720+00	1730+00	1740+00	1750+00	1752+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

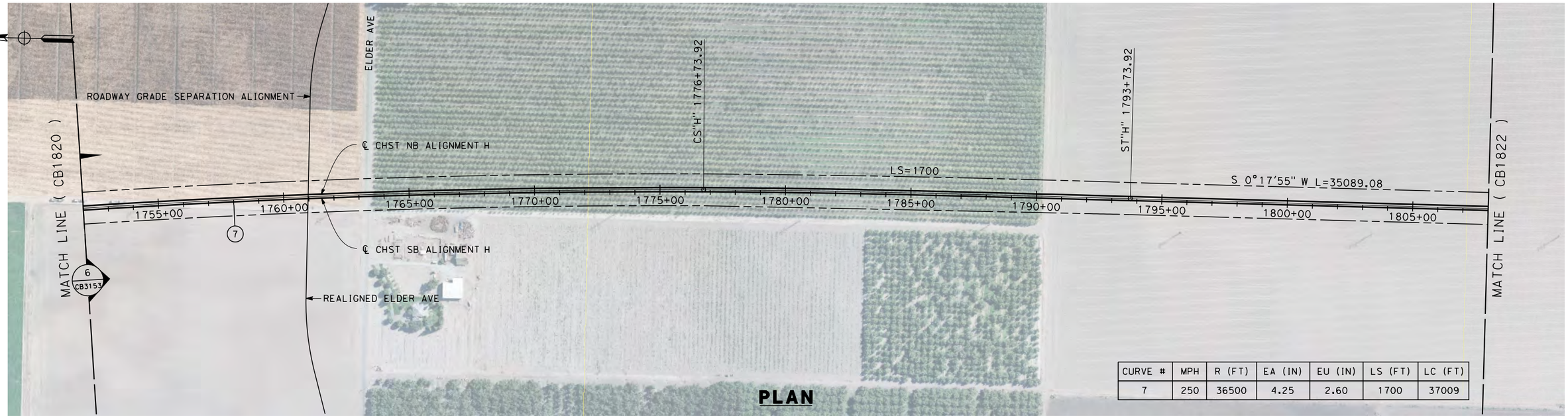
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1696+00 TO 1752+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1820
SCALE AS SHOWN
SHEET NO. 14 OF 31

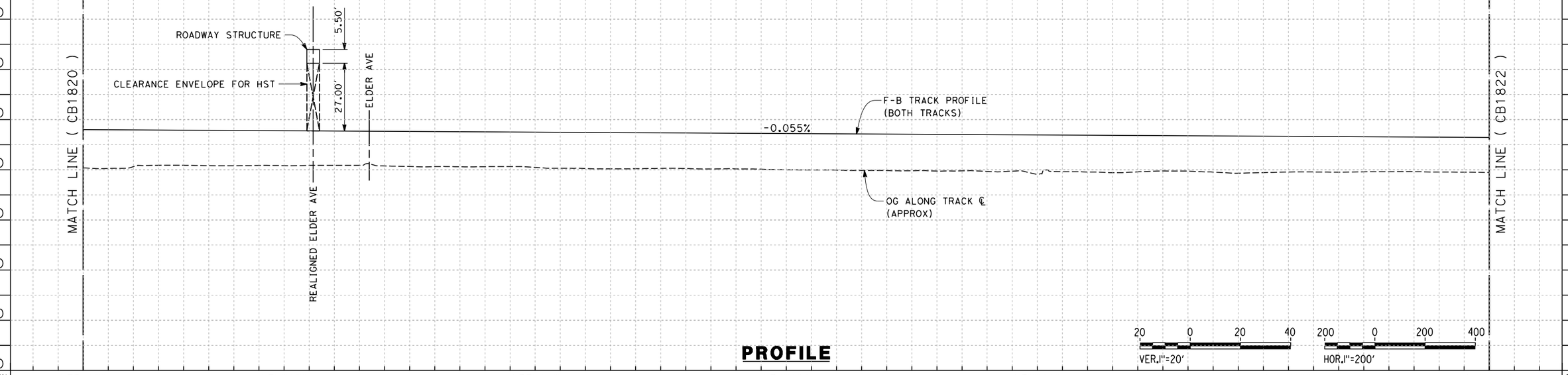
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
7	250	36500	4.25	2.60	1700	37009

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

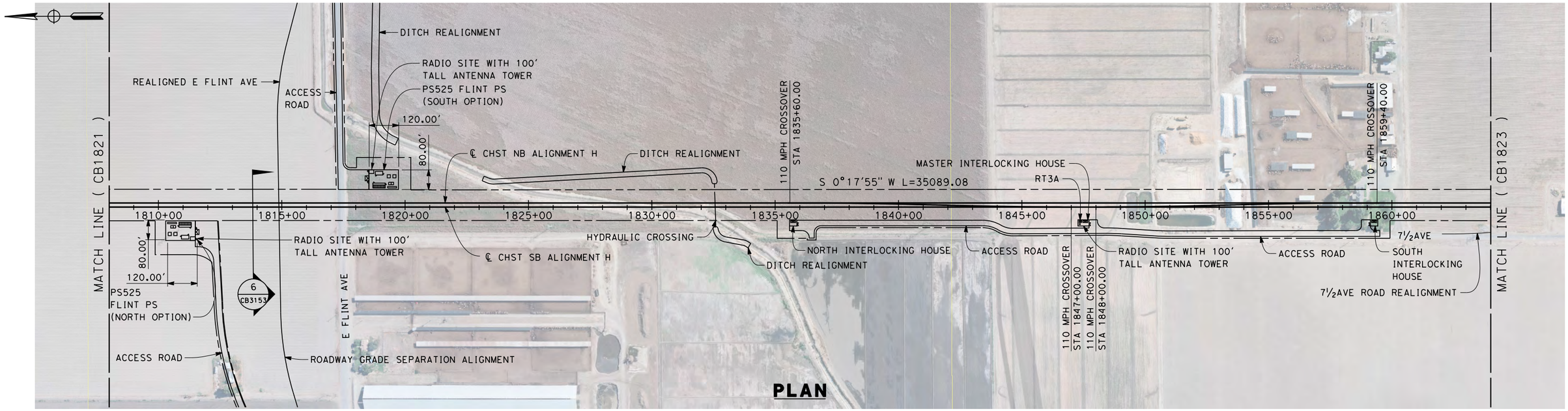
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1752+00 TO 1808+00
PLAN AND PROFILE

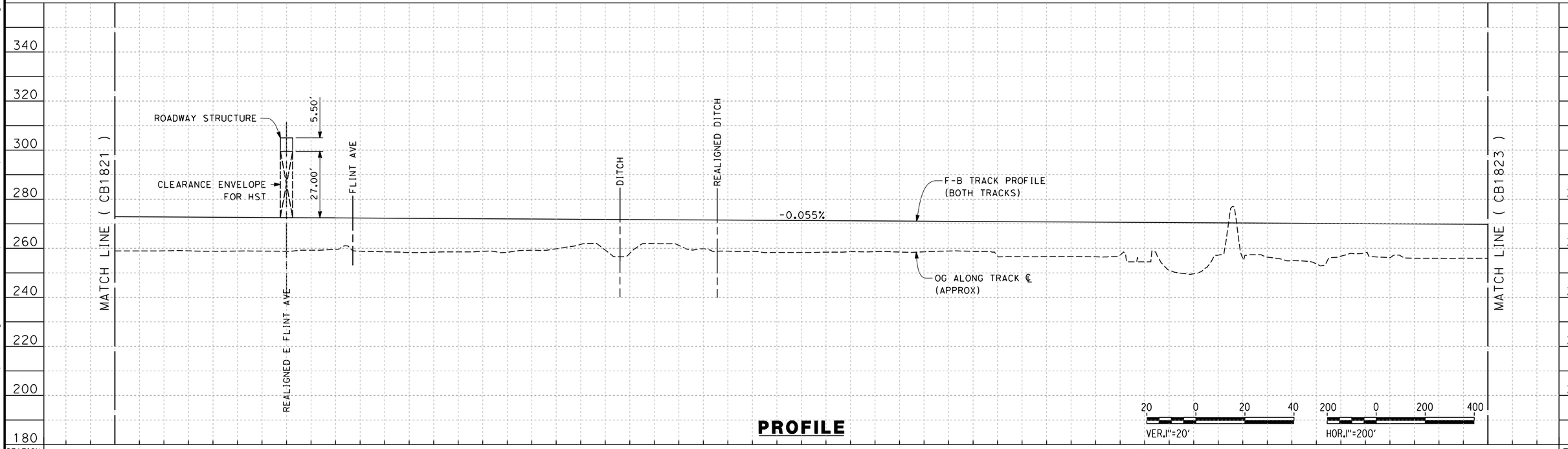
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SCALE AS SHOWN
SHEET NO. 15 OF 31

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	1808+00	1810+00	1820+00	1830+00	1840+00	1850+00	1860+00	1864+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

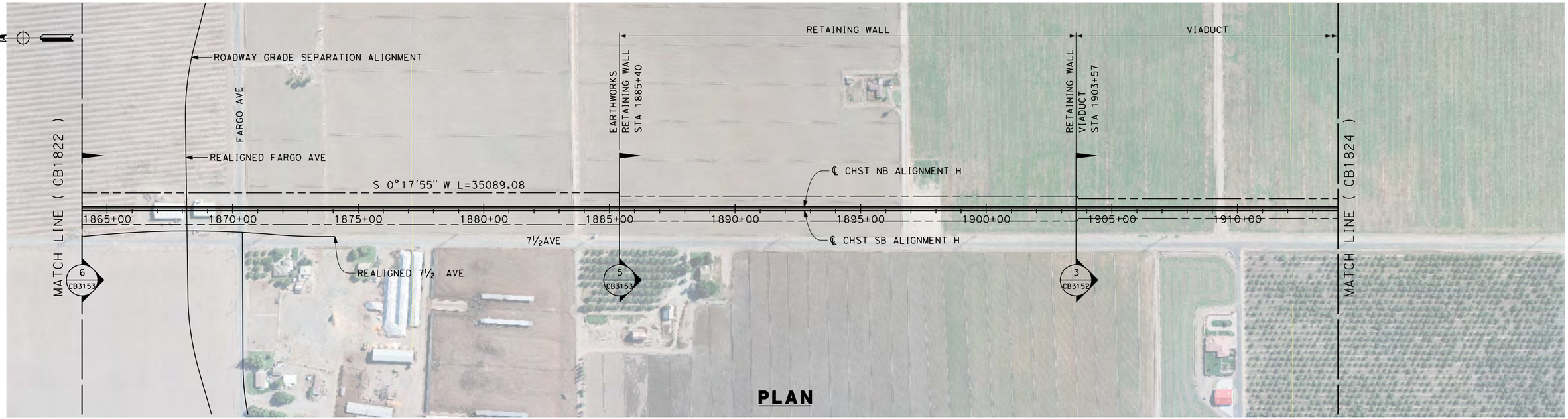
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1808+00 TO 1864+00
PLAN AND PROFILE

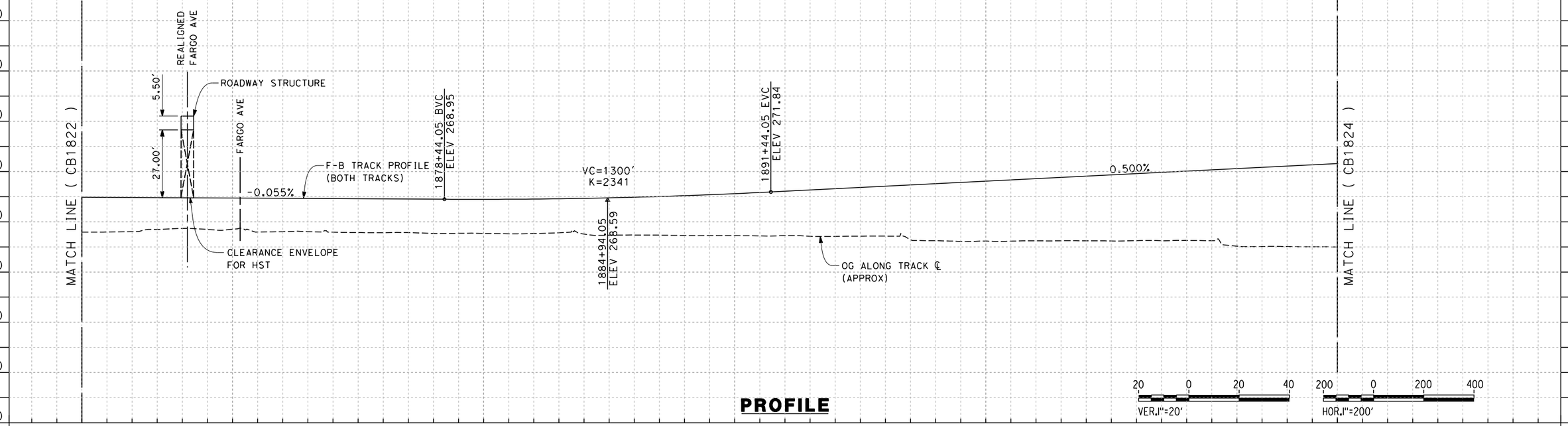
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DRAWING NO. CB1822
SCALE AS SHOWN
SHEET NO. 16 OF 31

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	1864+00	1870+00	1880+00	1890+00	1900+00	1910+00	1914+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

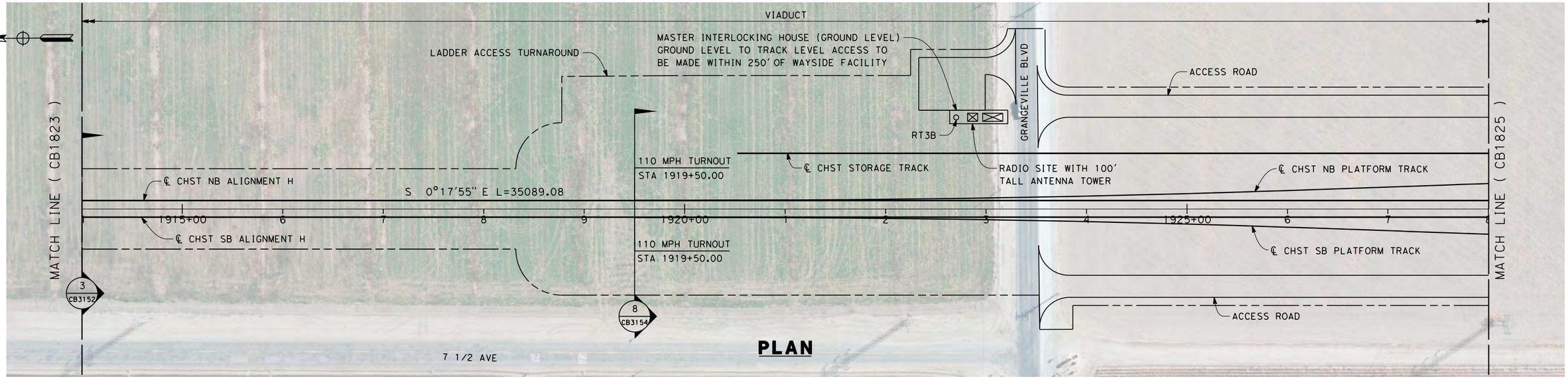
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

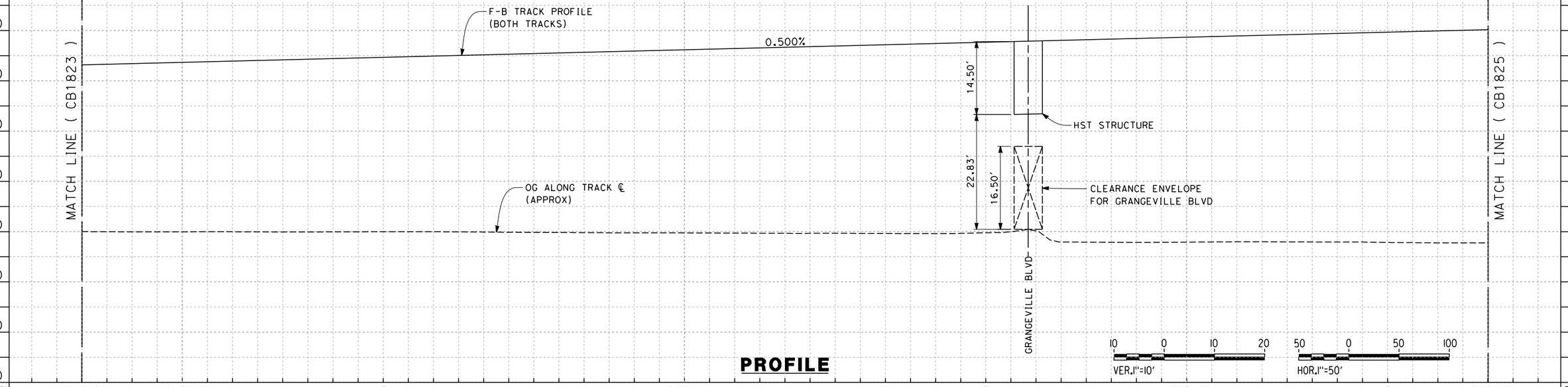
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FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1864+00 TO 1914+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1823
SCALE AS SHOWN
SHEET NO. 17 OF 31

RFP No.: HSR13-57
04/02/2014

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

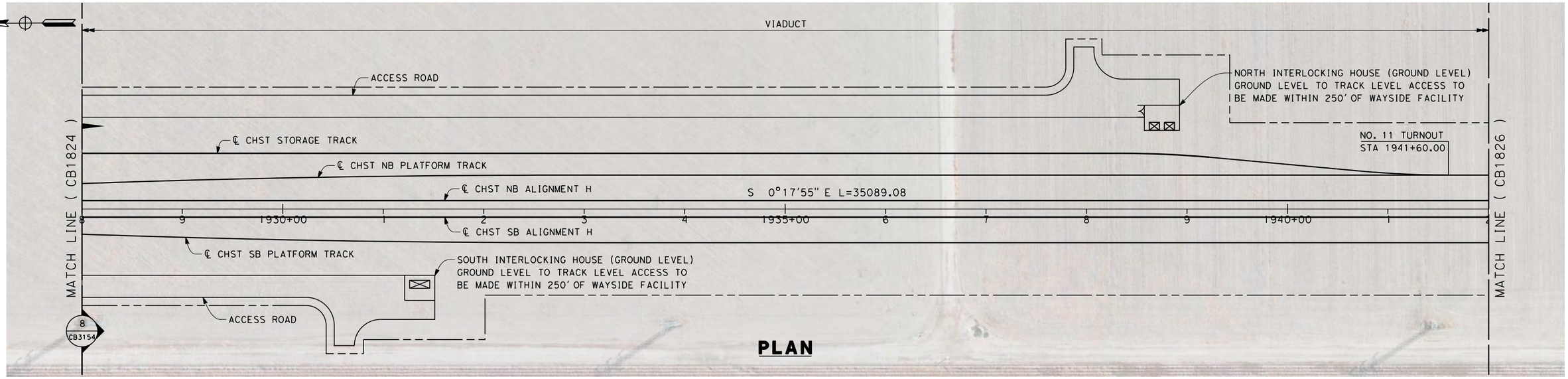
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

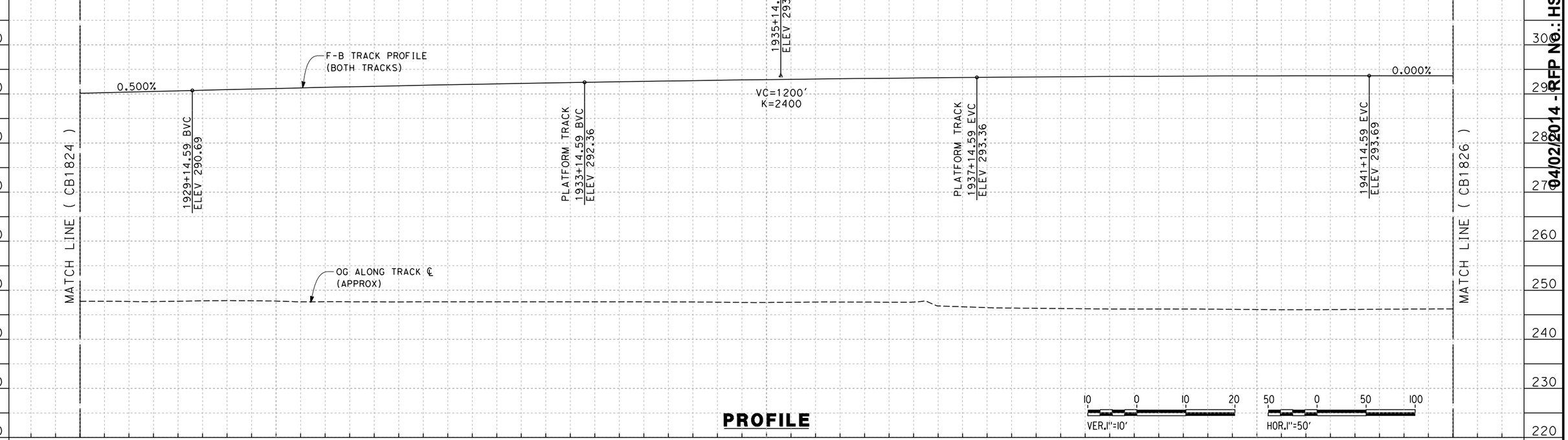
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1914+00 TO 1928+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1824
SCALE AS SHOWN
SHEET NO. 18 OF 31

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R.COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

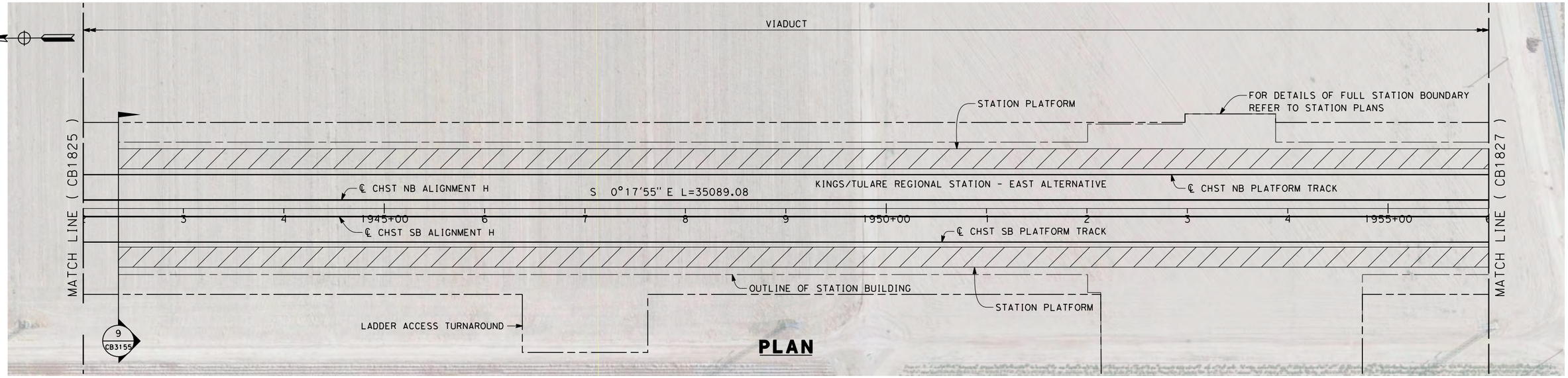
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

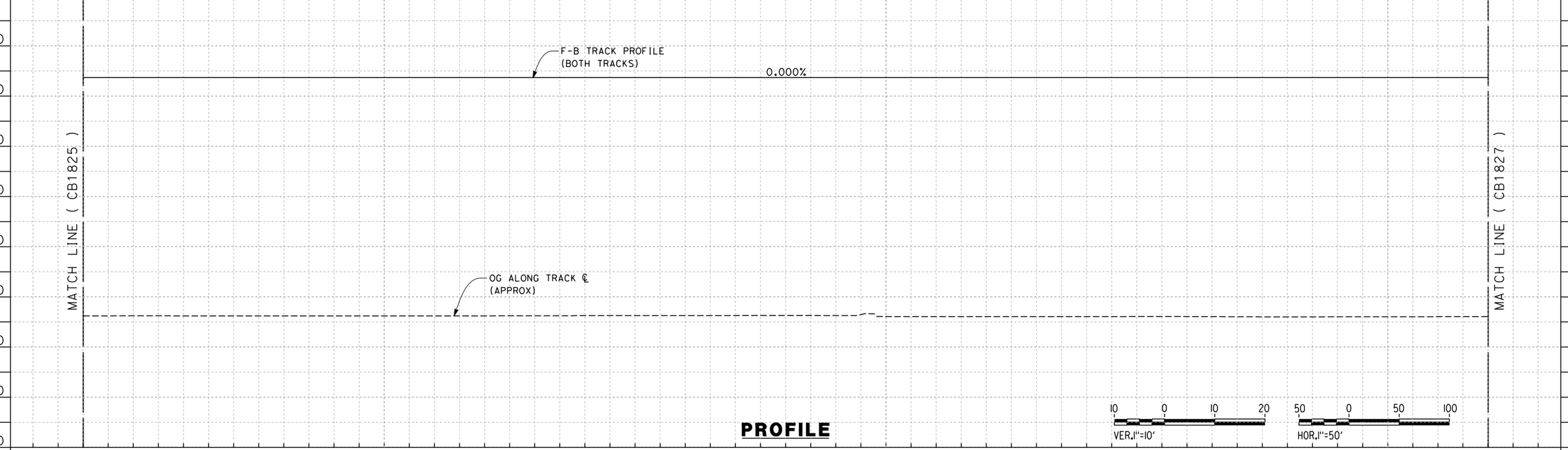
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 1928+00 TO 1942+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1825
SCALE AS SHOWN
SHEET NO. 19 OF 31

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

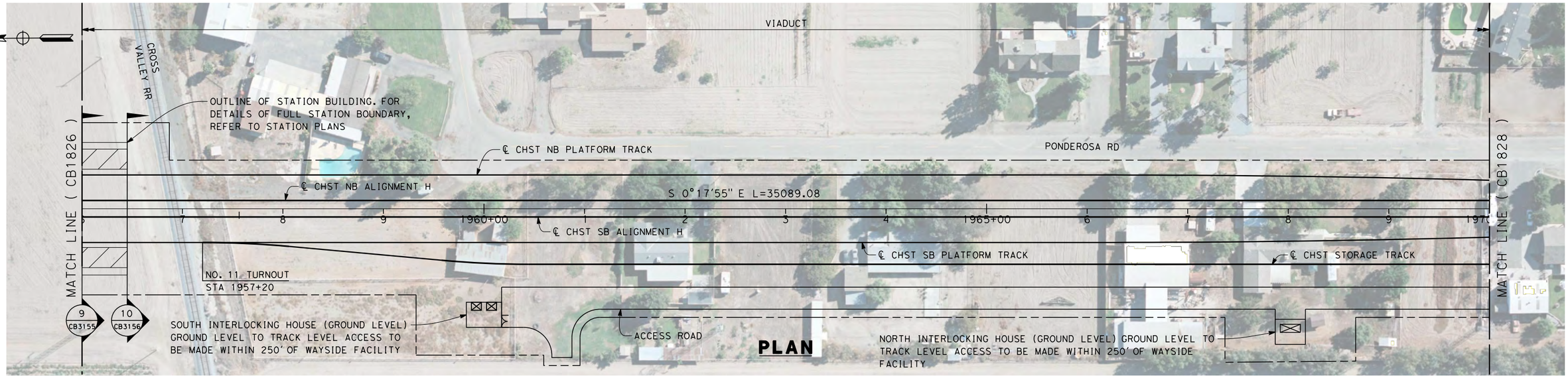
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1942+00 TO 1956+00
PLAN AND PROFILE

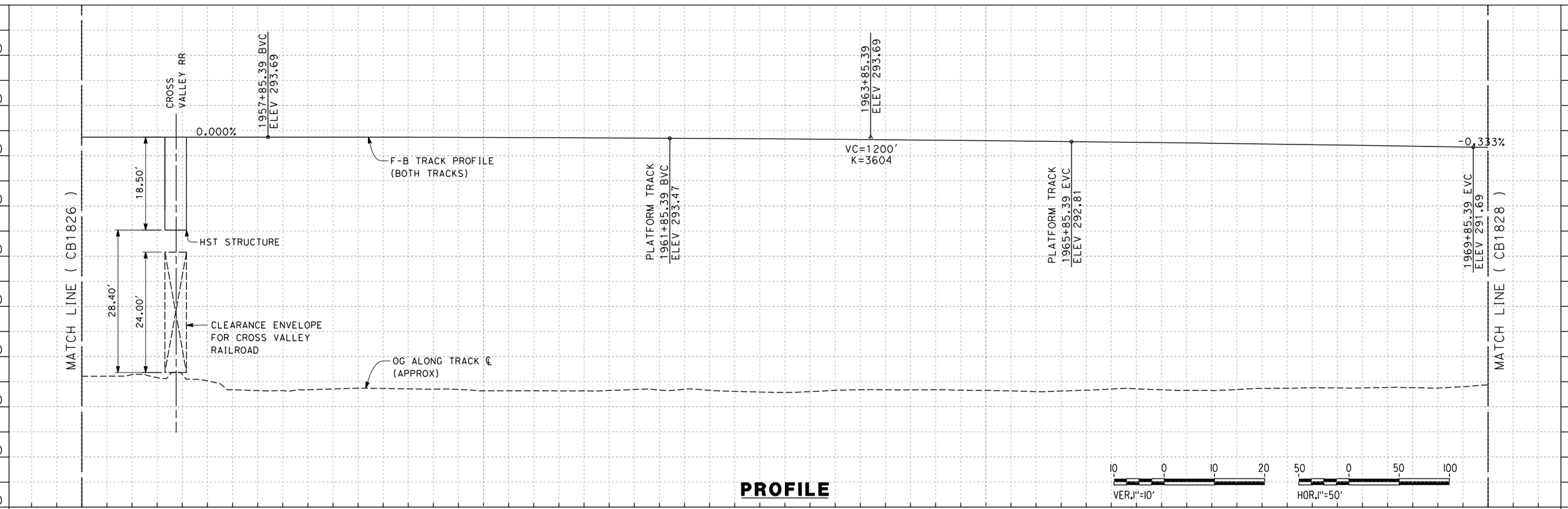
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DRAWING NO. CB1826
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SHEET NO. 20 OF 31

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	1956+00	7	8	9	1960+00	1	2	3	4	1965+00	6	7	8	9	1970+00	TOTAL
CY Exc																
CY Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

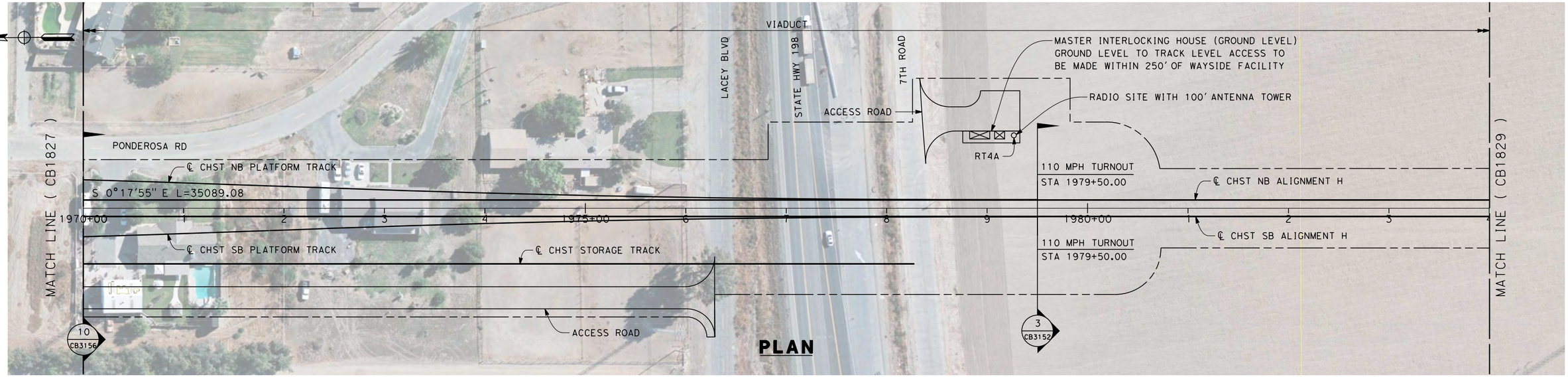
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 1956+00 TO 1970+00
PLAN AND PROFILE

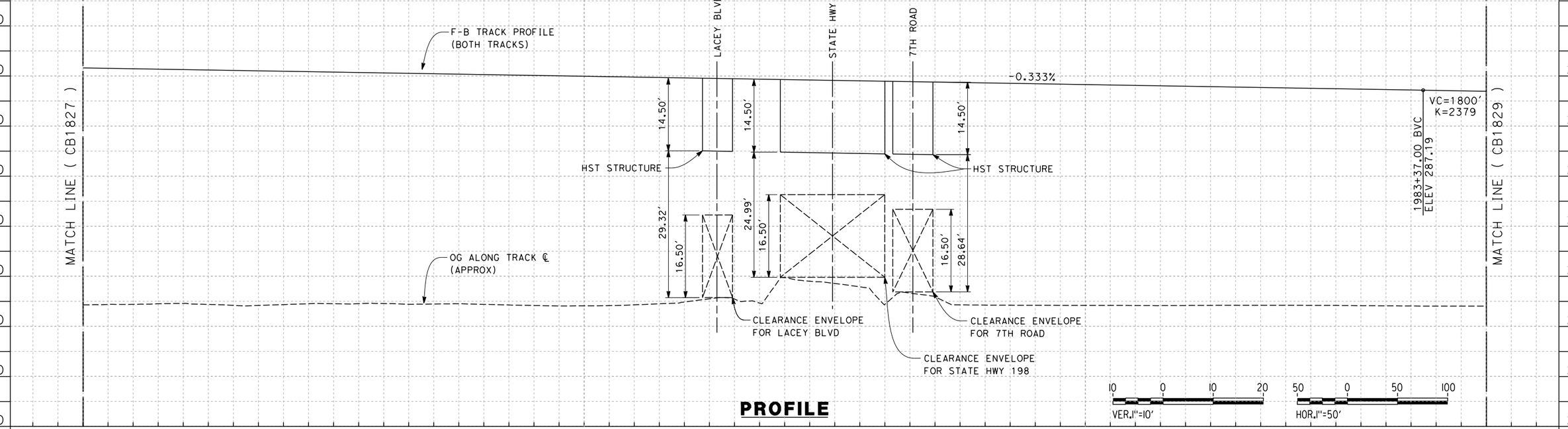
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1827
SCALE AS SHOWN
SHEET NO. 21 OF 31

04/02/2014 - RFP No.: HSR13-57

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paul.tonkin



PLAN



PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

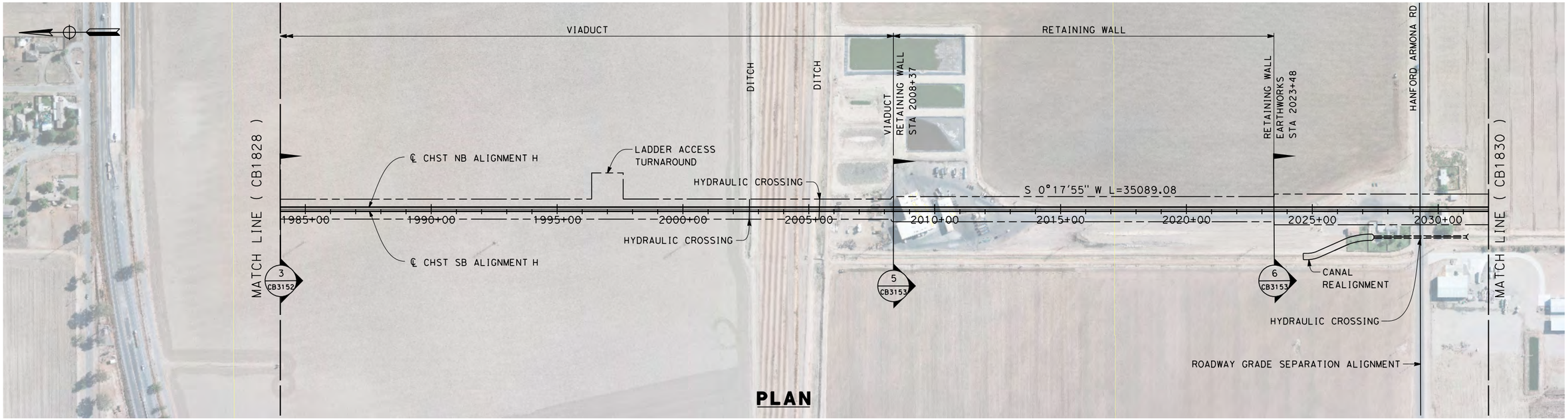
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

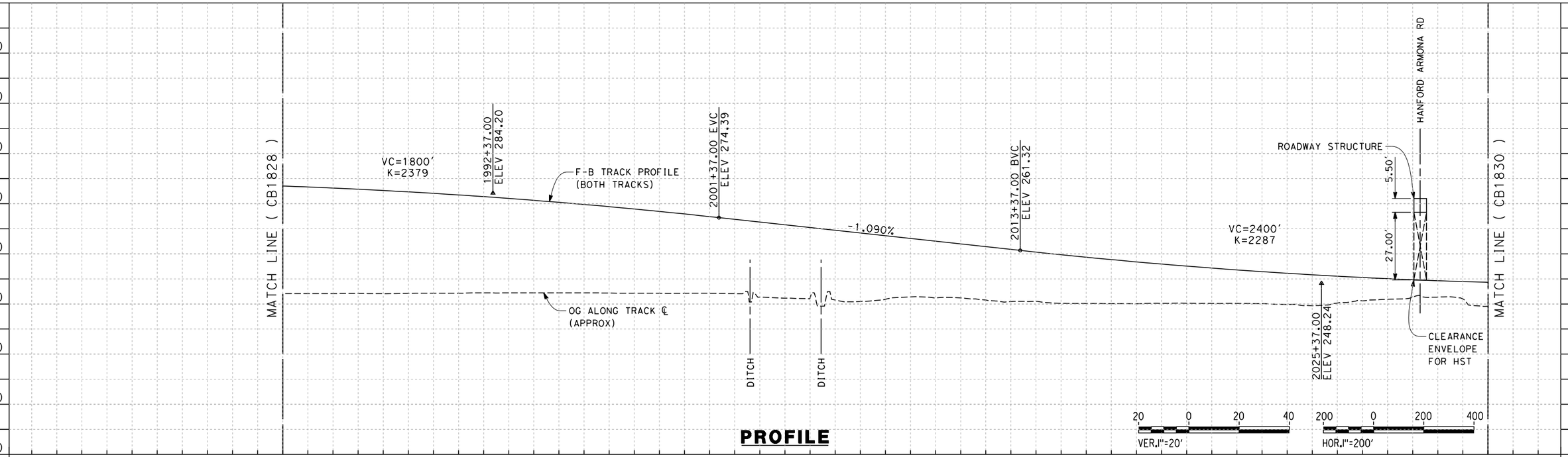
HANFORD SUBSECTION
ALIGNMENT H
STA. 1970+00 TO 1984+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1828
SCALE AS SHOWN
SHEET NO. 22 OF 31

04/02/2014 - RFP No.: HSR13-57



PLAN



PROFILE

STATION		1984+00	1990+00	2000+00	2010+00	2020+00	2030+00	2032+00	TOTAL
CY	Exc								
	Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

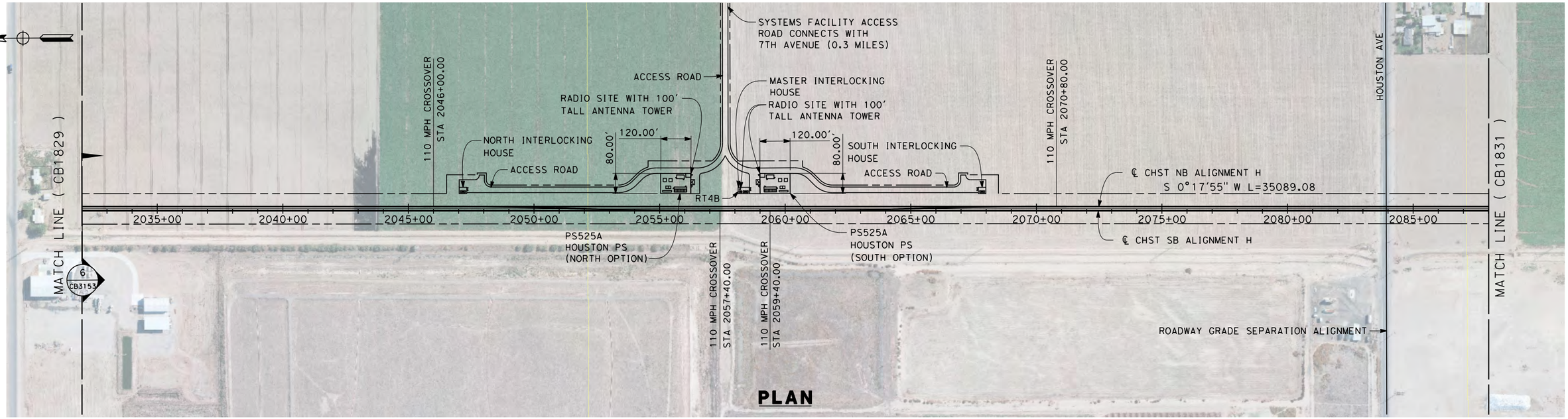
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

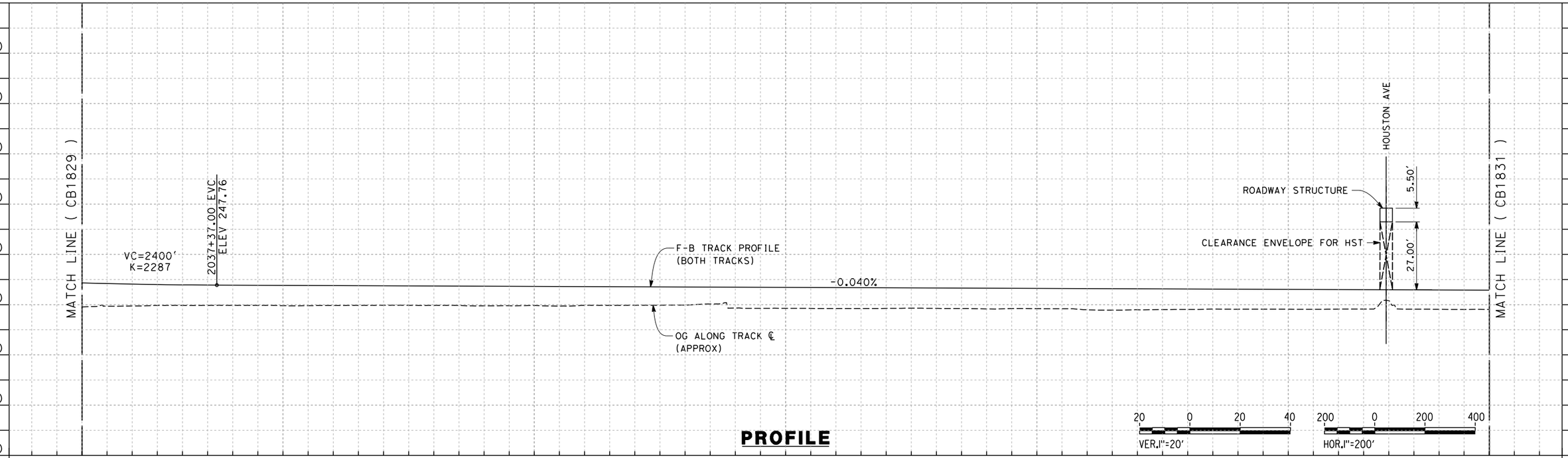
HANFORD SUBSECTION
ALIGNMENT H
STA. 1984+00 TO 2032+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1829
SCALE AS SHOWN
SHEET NO. 23 OF 31

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
STA. 2032+00 TO 2088+00
PLAN AND PROFILE

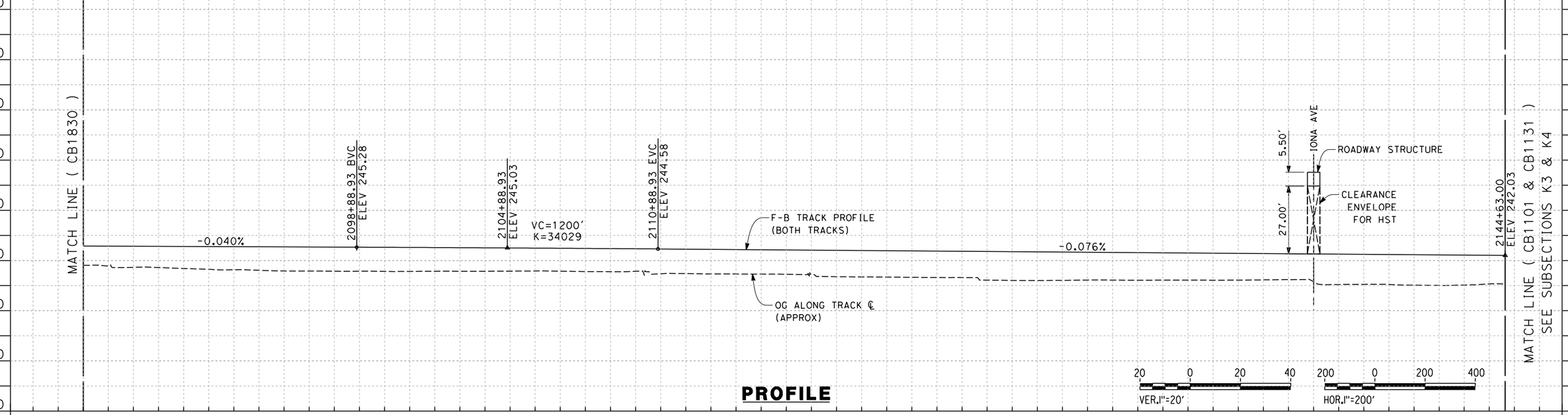
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1830
SCALE AS SHOWN
SHEET NO. 24 OF 31

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
STA. 2088+00 TO 2144+63
PLAN AND PROFILE

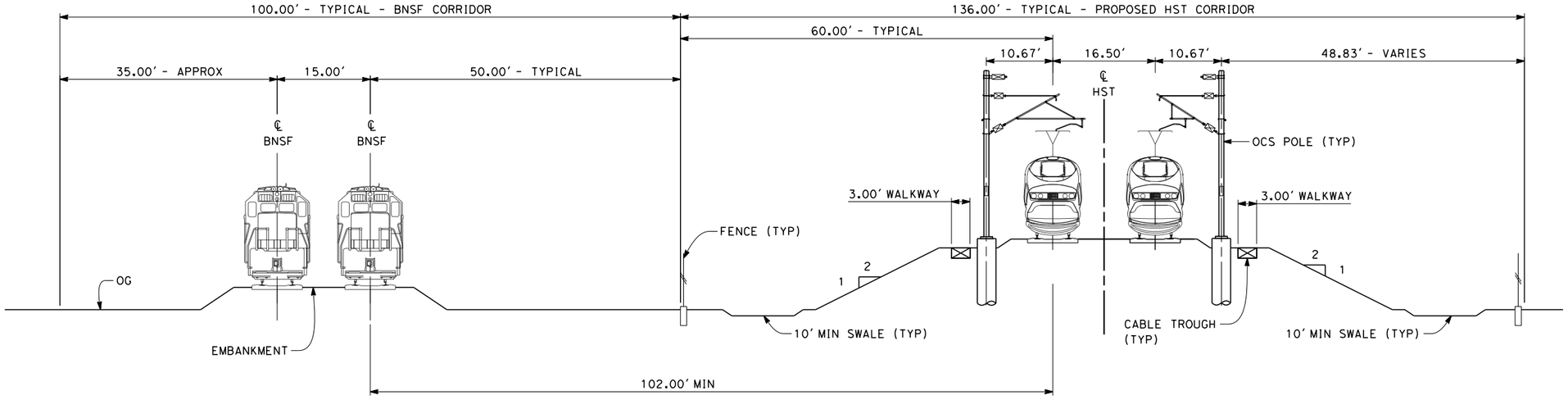
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1831
SCALE AS SHOWN
SHEET NO. 25 OF 31

RFP No.: HSR13-57
04/02/2014 - RFP

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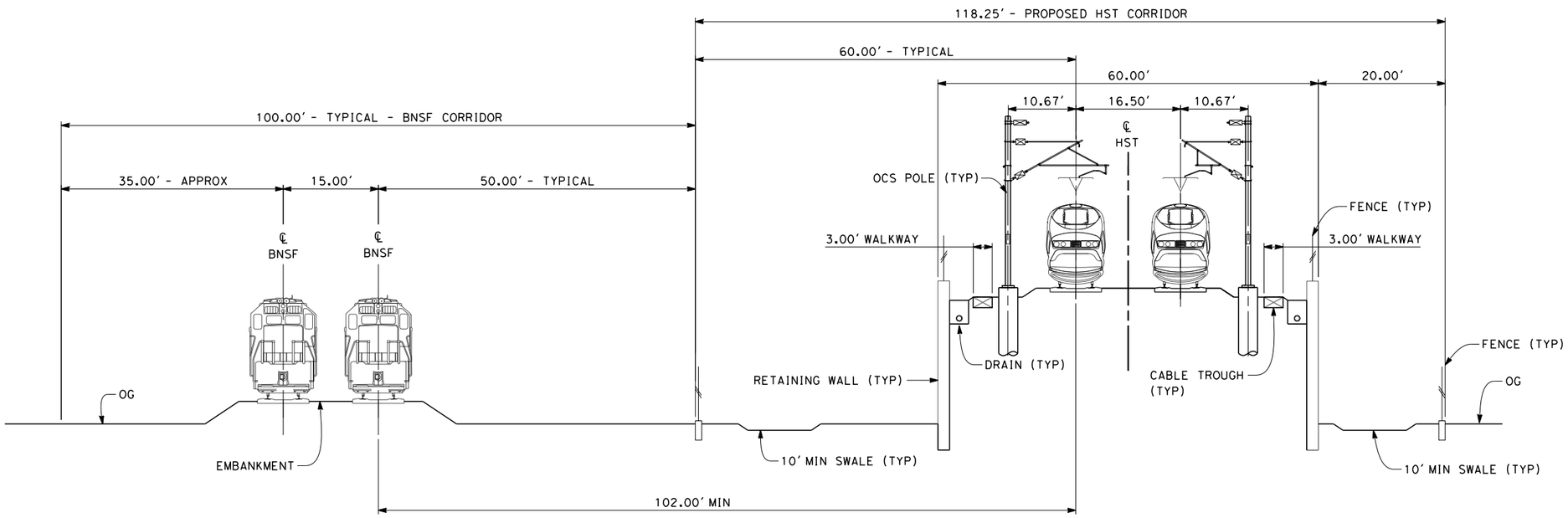
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.



SECTION 1

TWIN TRACK ADJACENT TO EXISTING BNSF - EMBANKMENT WITH OPEN DRAINAGE
STA 1065+07 THROUGH STA 1086+00



SECTION 2

TWIN TRACK ADJACENT TO EXISTING BNSF - RETAINED EMBANKMENT WITH OPEN DRAINAGE
STA 1086+00 THROUGH STA 1105+70

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

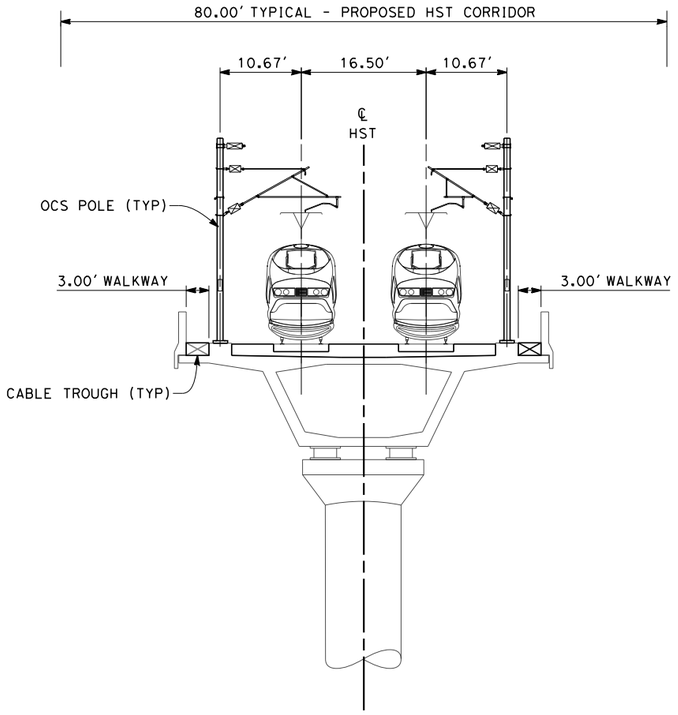
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3151
SCALE AS SHOWN
SHEET NO. 26 OF 31

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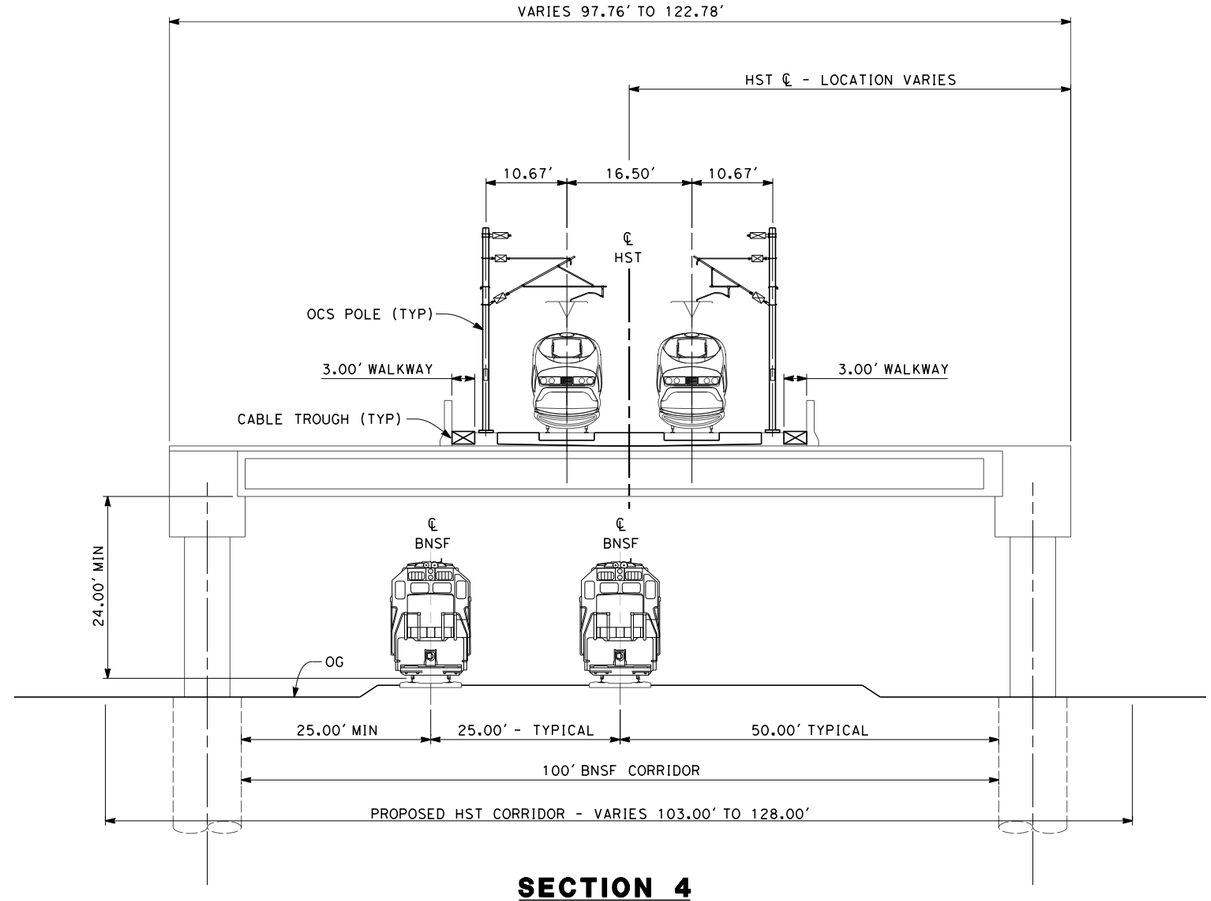
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.



SECTION 3

TWIN TRACK - AERIAL STRUCTURE
STA 1105+70 THROUGH STA 1120+30
STA 1134+60 THROUGH STA 1156+20
STA 1463+58 THROUGH STA 1464+80
STA 1466+97 THROUGH STA 1485+70
STA 1489+27 THROUGH STA 1518+30
STA 1525+44 THROUGH STA 1580+87
STA 1587+31 THROUGH STA 1593+34
STA 1903+57 THROUGH STA 1919+50
STA 1979+50 THROUGH STA 2008+37



SECTION 4

TWIN TRACK - ELEVATED SLAB OVER BNSF
STA 1120+30 THROUGH STA 1134+60

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

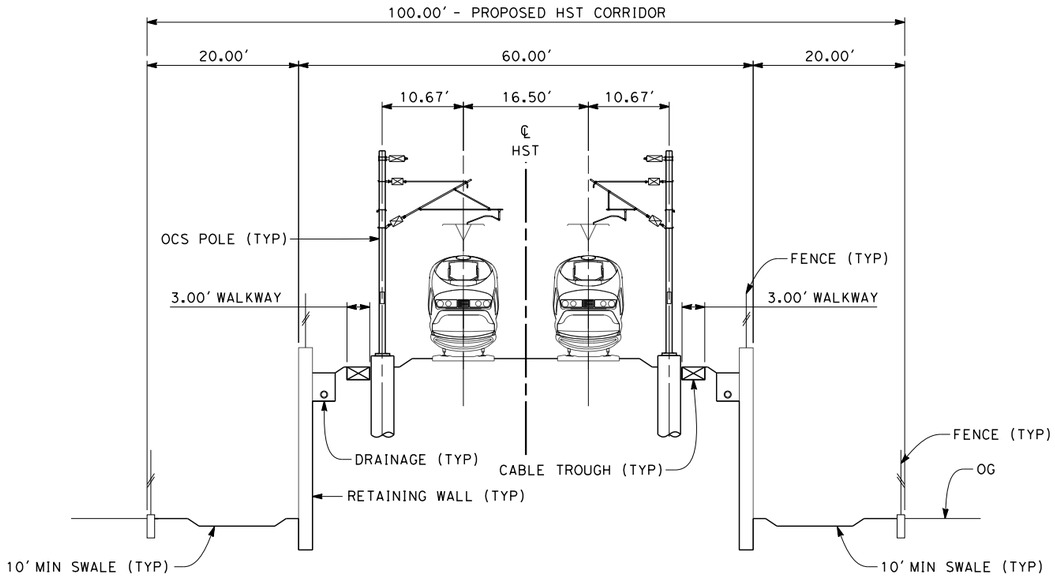
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3152
SCALE AS SHOWN
SHEET NO. 27 OF 31

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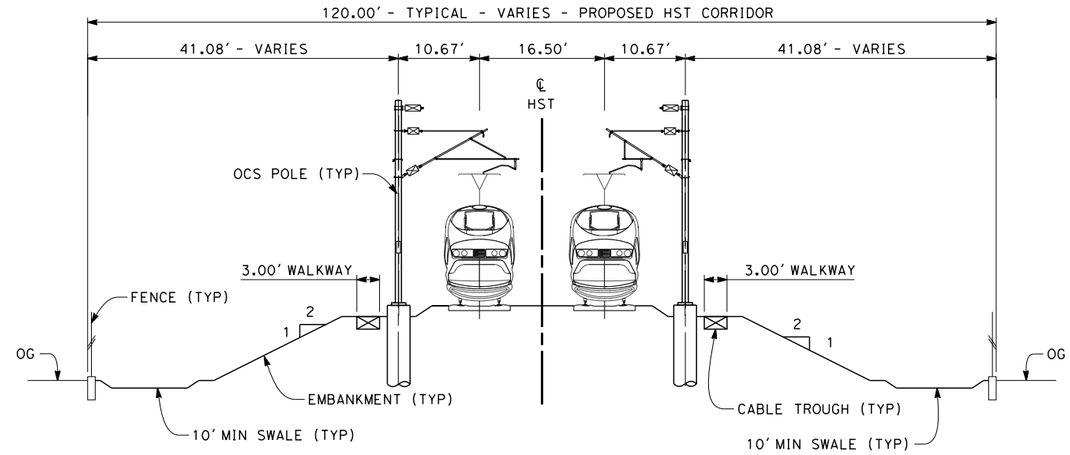
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.



SECTION 5

TWIN TRACK - RETAINED EMBANKMENT WITH OPEN DRAINAGE
STA 1156+20 THROUGH STA 1173+50
STA 1439+19 THROUGH STA 1463+58
STA 1596+56 THROUGH STA 1622+50
STA 1885+40 THROUGH STA 1903+57
STA 2008+37 THROUGH STA 2023+48



SECTION 6

TWIN TRACK - EMBANKMENT WITH OPEN DRAINAGE
STA 1173+50 THROUGH STA 1439+19
STA 1622+50 THROUGH STA 1885+40
STA 2023+48 THROUGH STA 2144+63

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

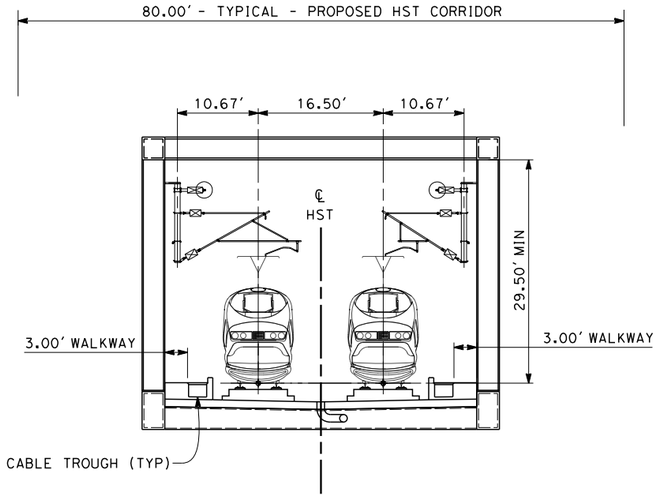
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

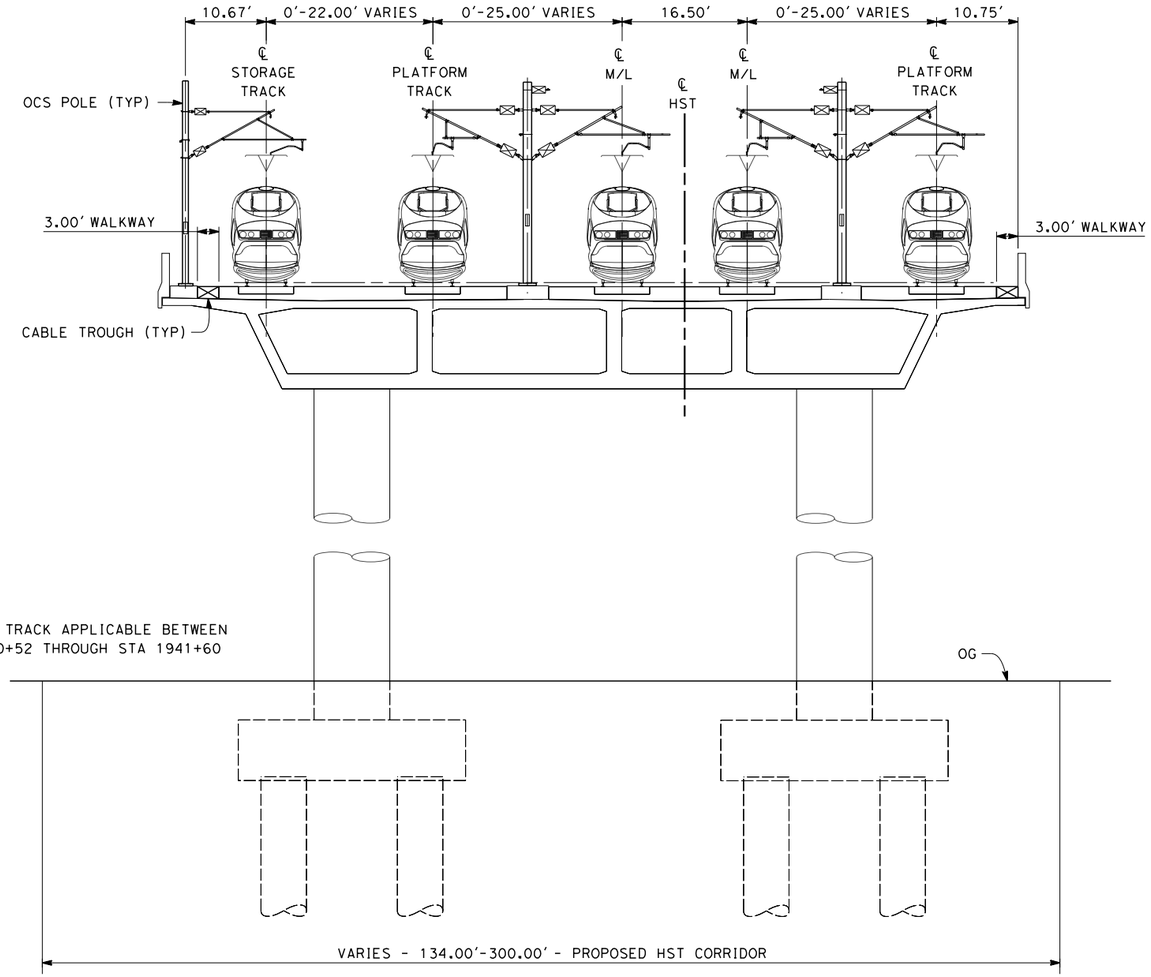
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3153
SCALE AS SHOWN
SHEET NO. 28 OF 31

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SECTION 7

TWIN TRACK- AERIAL STEEL TRUSS
STA 1464+80 THROUGH STA 1466+97
STA 1485+70 THROUGH STA 1489+27
STA 1518+30 THROUGH STA 1525+44
STA 1580+87 THROUGH STA 1587+31
STA 1593+34 THROUGH STA 1596+56



SECTION 8

5 TRACK ELEVATED STATION APPROACH
STA 1919+50 THROUGH STA 1942+27

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

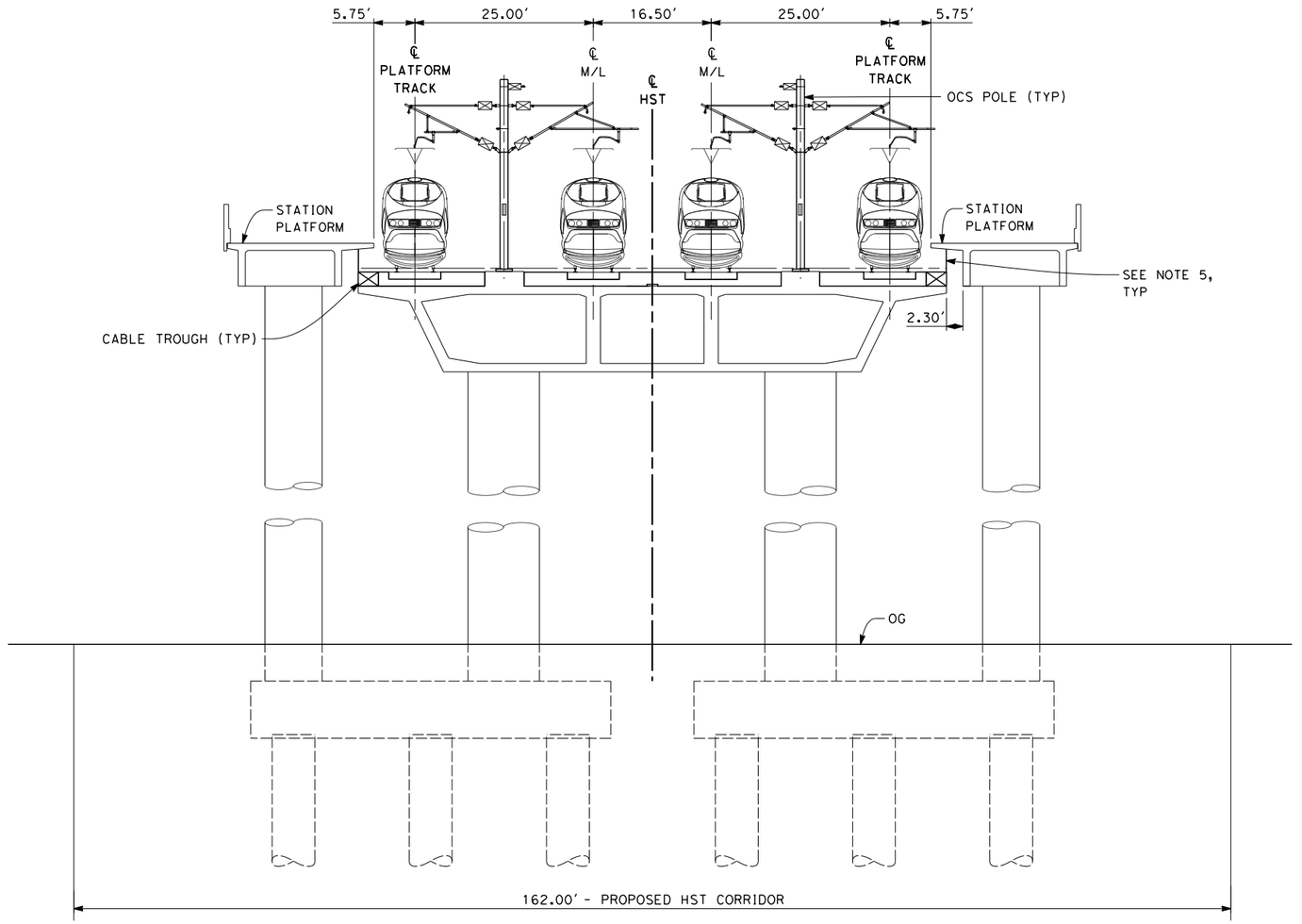
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3154
SCALE AS SHOWN
SHEET NO. 29 OF 31

Nadine.Hutton 12/12/2013 4:25:52 PM c:\pwworking\hmm\external\nadine.hutton-arup.com\d0125343\FB-CB-3154-H.dgn

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.
4. HST CORRIDOR WIDTH VARIES THROUGH THE STATION ACCORDING TO THE STATION FACILITIES PROVIDED. SEE STATION DRAWINGS FOR DETAILS.
5. MESH FENCE TO BE PROVIDED BETWEEN VIADUCT AND PLATFORM AS FALL PREVENTION BARRIER.



SECTION 9

4 TRACK ELEVATED PLATFORMS
STA 1942+27 THROUGH STA 1956+67

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

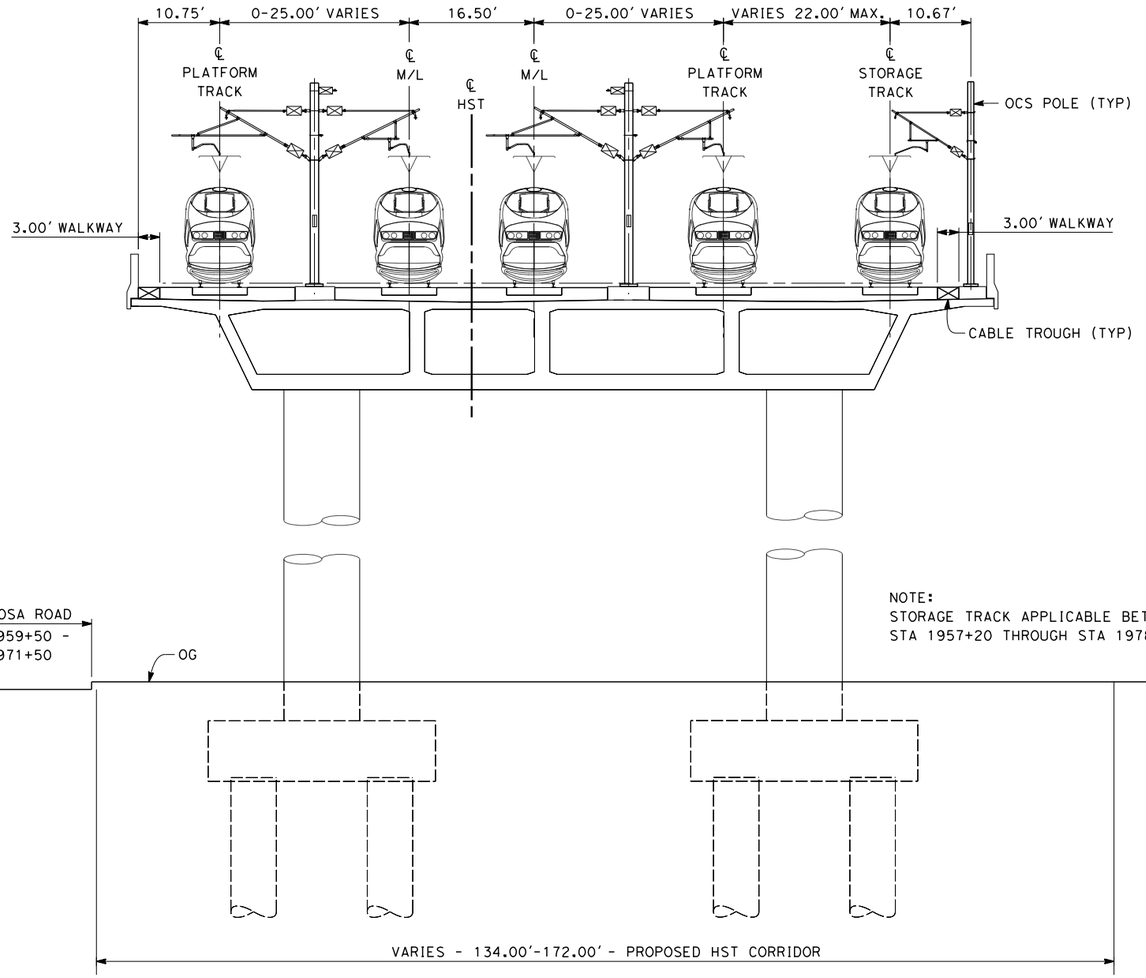
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3155
SCALE AS SHOWN
SHEET NO. 30 OF 31

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN IN CROSS SECTIONS. FOR DETAILS OF SUPERELEVATION SEE CURVE TABLES.



SECTION 10

5 TRACK ELEVATED STATION APPROACH
STA 1956+67 THROUGH STA 1979+50

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3156
SCALE AS SHOWN
SHEET NO. 31 OF 31

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

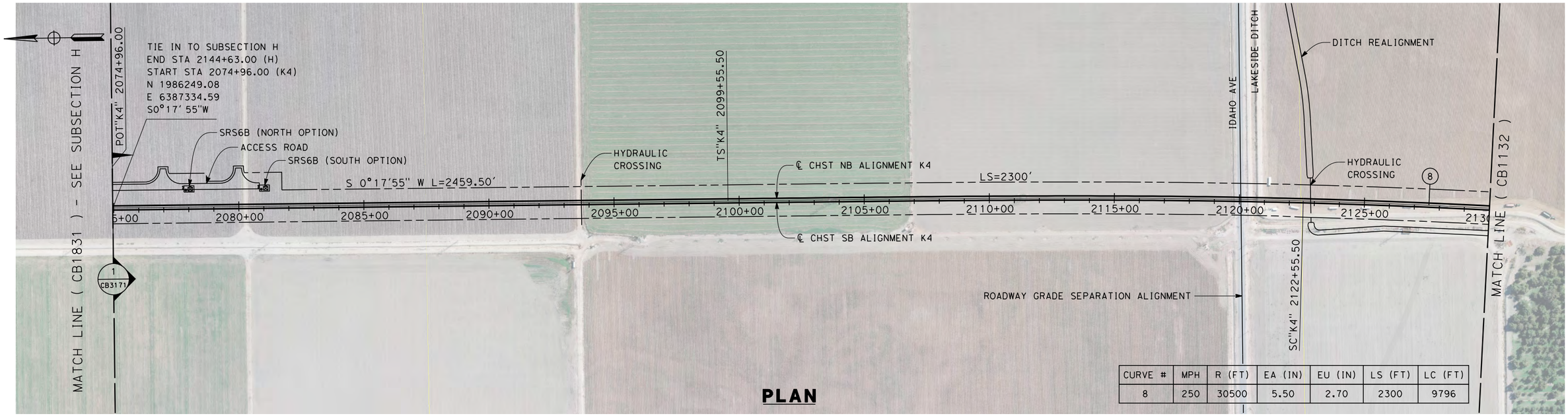
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2074+96 TO 2598+60
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1130
SCALE AS SHOWN
SHEET NO. 1 OF 15

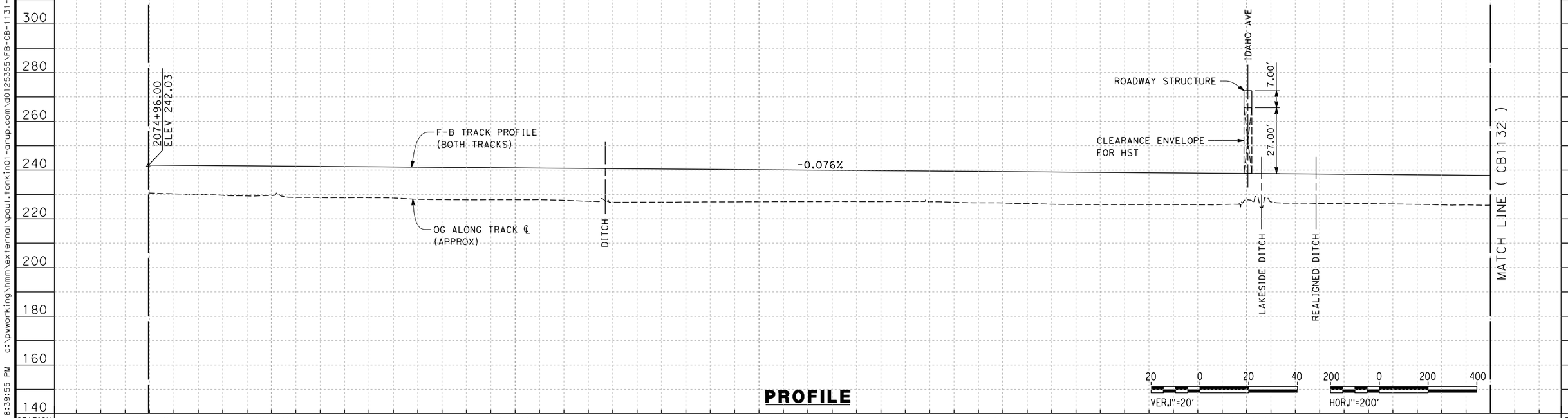
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
8	250	30500	5.50	2.70	2300	9796

PLAN



PROFILE

STATION	2075+00	2080+00	2090+00	2100+00	2110+00	2120+00	2130+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

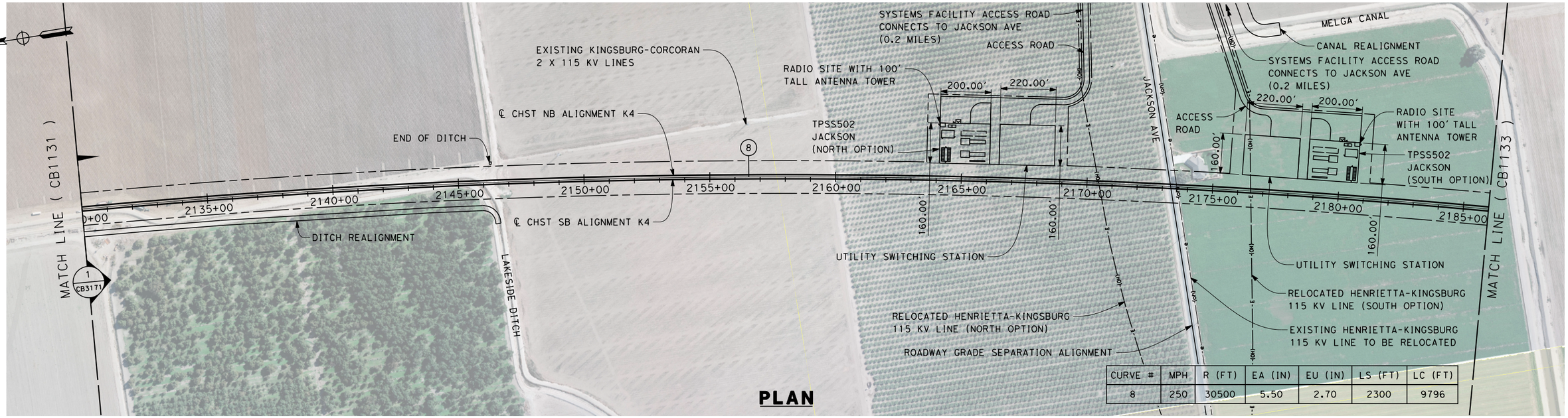
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STA 2074+96 TO 2130+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1131
SCALE AS SHOWN
SHEET NO. 2 OF 15

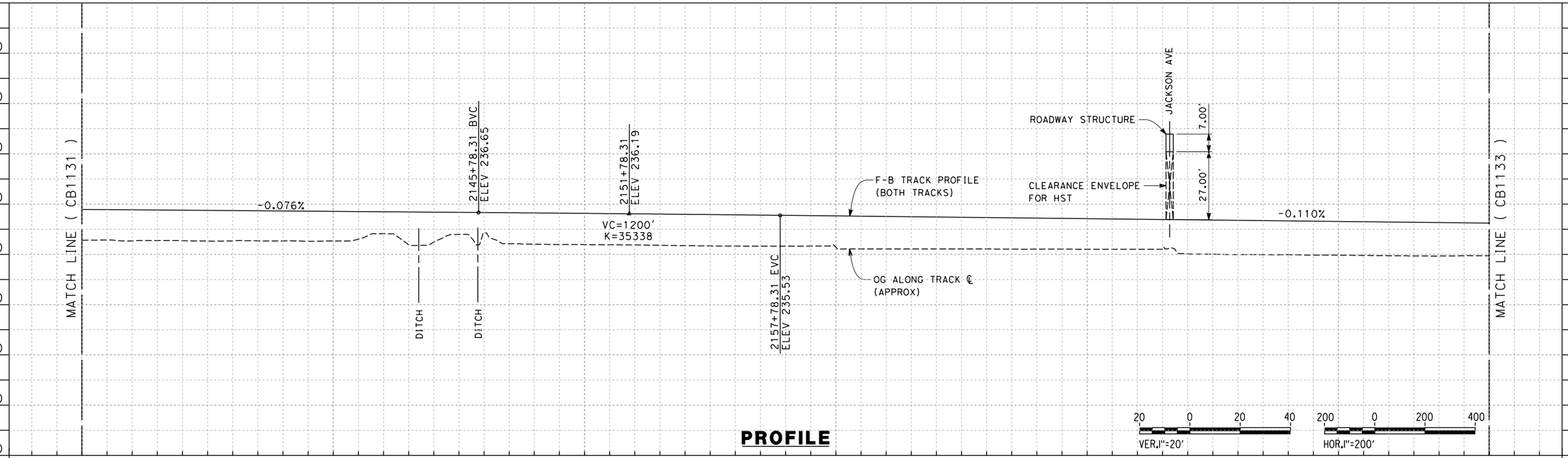
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
8	250	30500	5.50	2.70	2300	9796

PLAN



PROFILE

STATION	2130+00	2140+00	2150+00	2160+00	2170+00	2180+00	2186+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

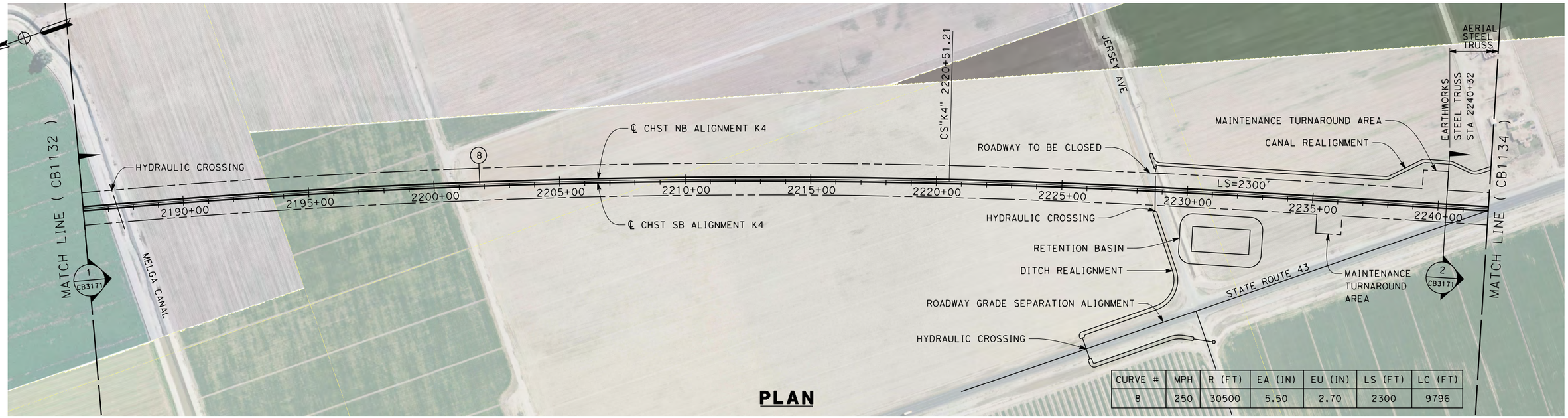
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2130+00 TO 2186+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1132
SCALE AS SHOWN
SHEET NO. 3 OF 15

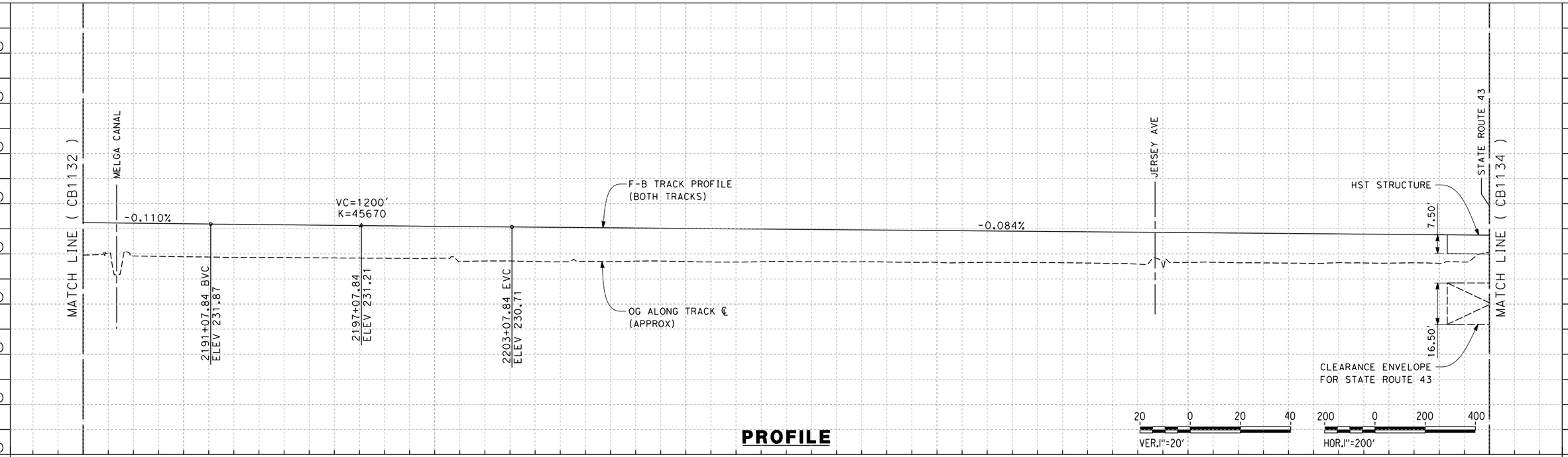
RFP No.: HSR13-57 - 04/02/2014

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
8	250	30500	5.50	2.70	2300	9796

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

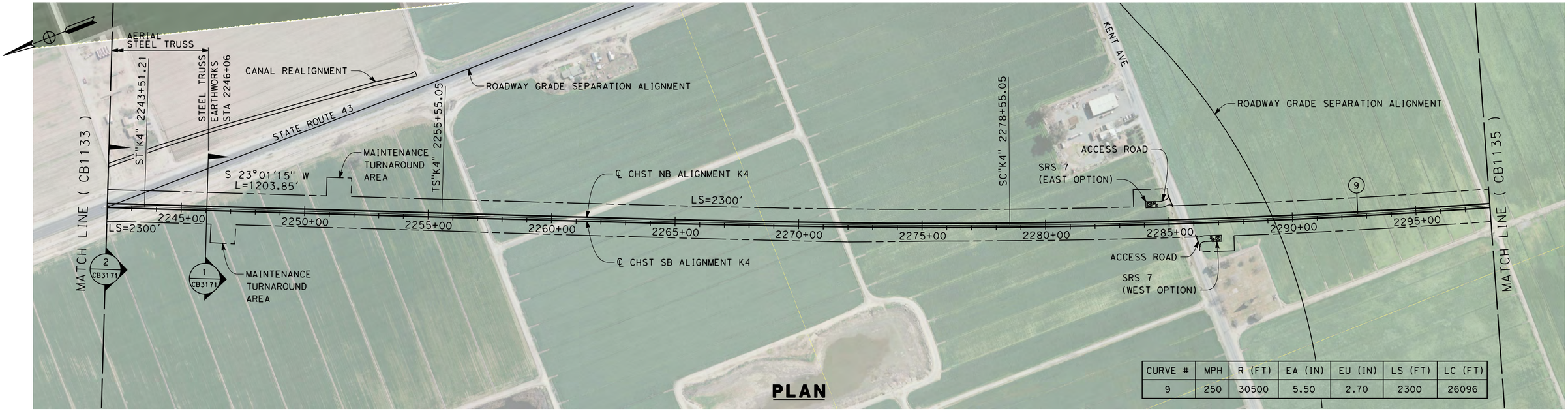
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2186+00 TP 2242+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1133
SCALE AS SHOWN
SHEET NO. 4 OF 15

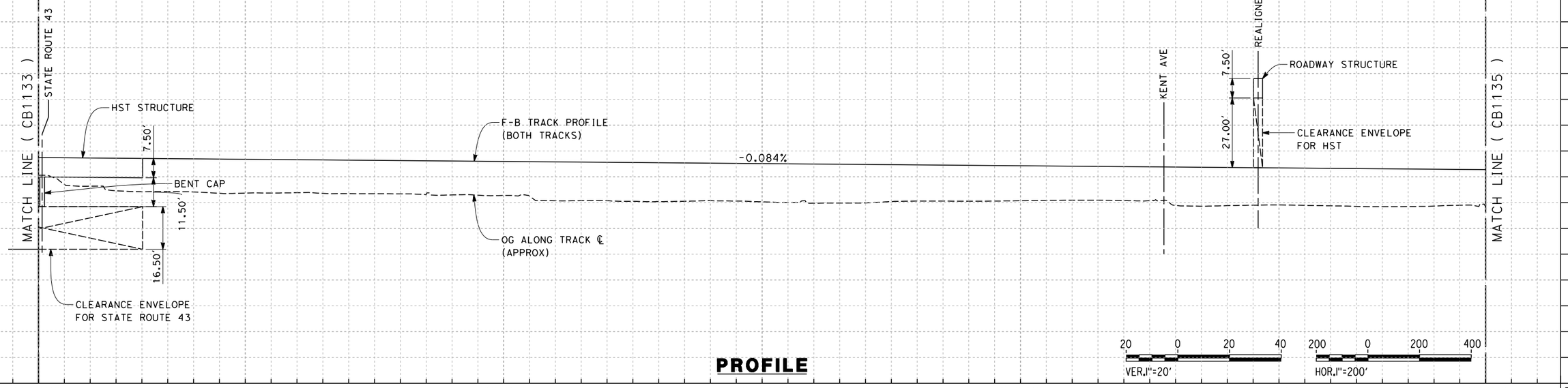
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

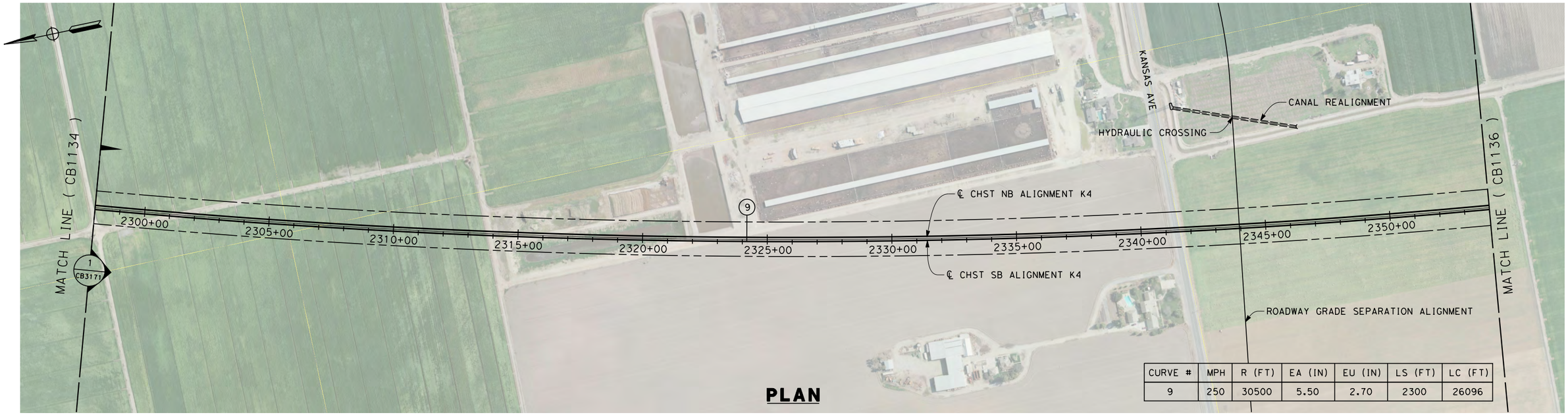
CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2242+00 TO 2298+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1134
SCALE AS SHOWN
SHEET NO. 5 OF 15

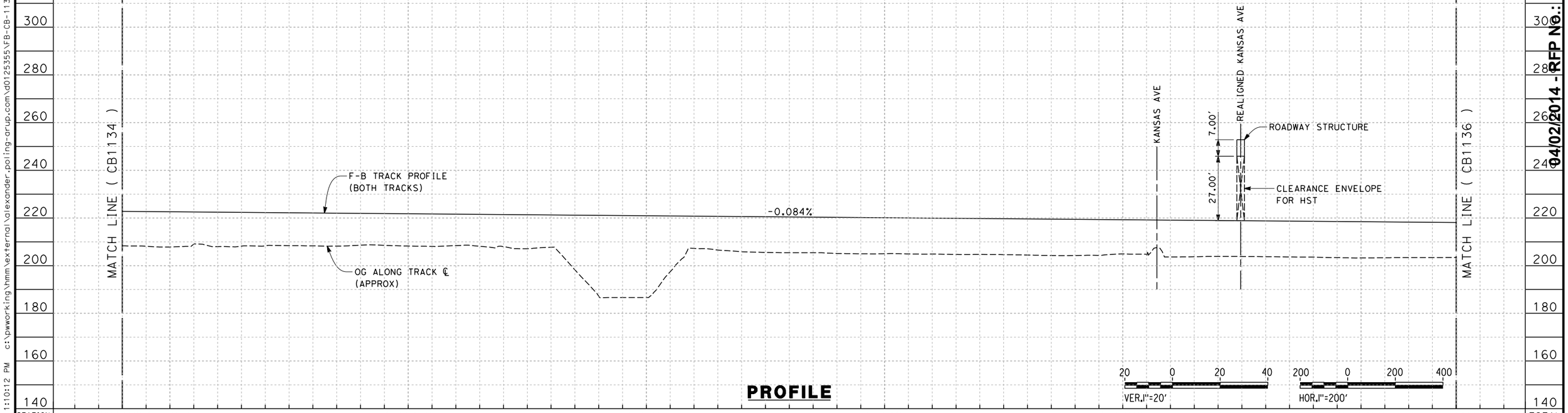
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096

PLAN



PROFILE

STATION	2298+00	2300+00	2310+00	2320+00	2330+00	2340+00	2350+00	2354+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

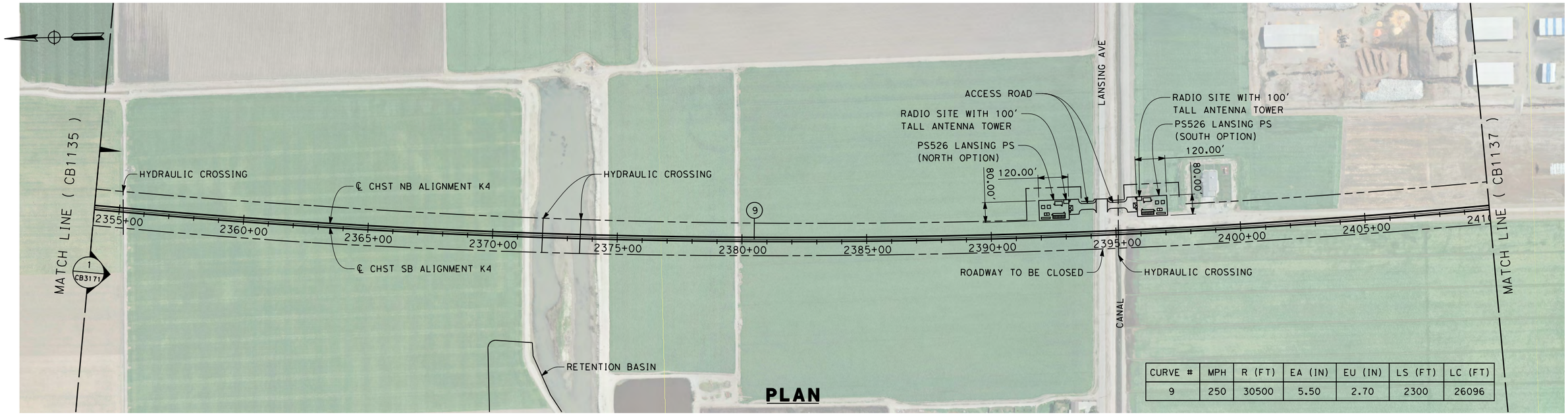
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2298+00 TO 2354+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1135
SCALE AS SHOWN
SHEET NO. 6 OF 15

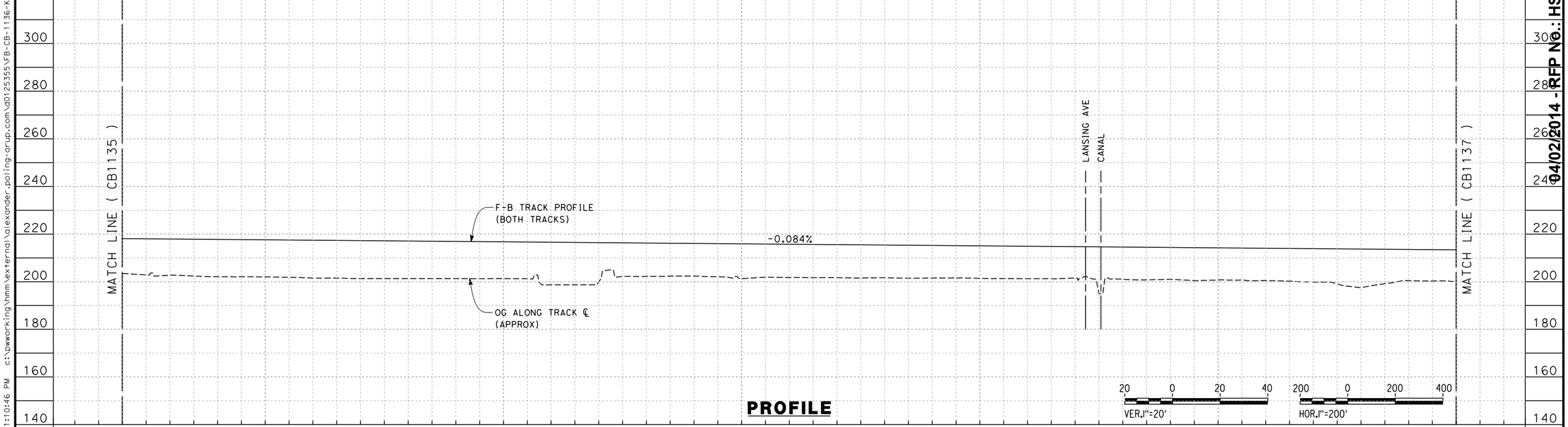
04/02/2014 - RFP No.: HSR13-57

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096

PLAN



PROFILE

STATION	2354+00	2360+00	2370+00	2380+00	2390+00	2400+00	2410+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

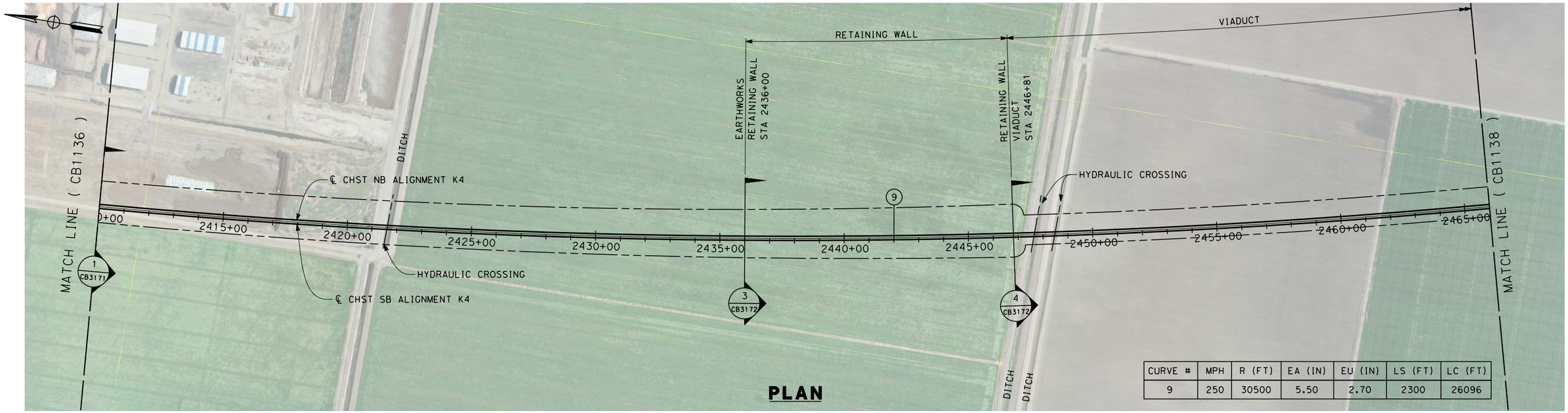
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2354+00 TO 2410+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1136
SCALE AS SHOWN
SHEET NO. 7 OF 15

04/02/2014 - RFP No.: HSR13-57

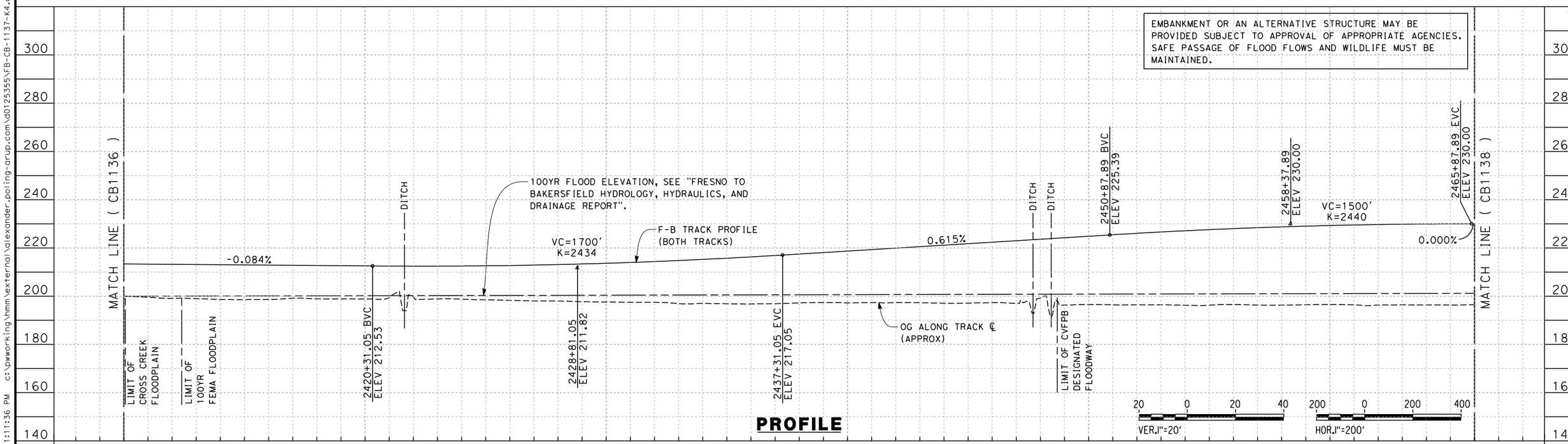
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096

PLAN

EMBANKMENT OR AN ALTERNATIVE STRUCTURE MAY BE PROVIDED SUBJECT TO APPROVAL OF APPROPRIATE AGENCIES. SAFE PASSAGE OF FLOOD FLOWS AND WILDLIFE MUST BE MAINTAINED.



PROFILE

STATION	2410+00	2420+00	2430+00	2440+00	2450+00	2460+00	2466+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

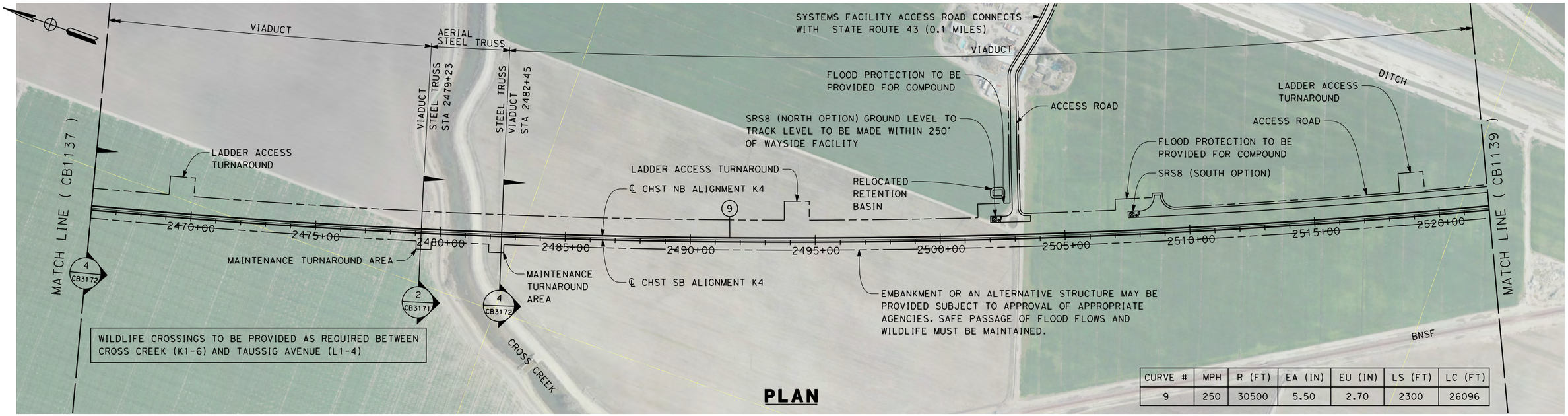
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2410+00 TO 2466+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1137
SCALE AS SHOWN
SHEET NO. 8 OF 15

04/02/2014 - RFP No.: HSR13-57

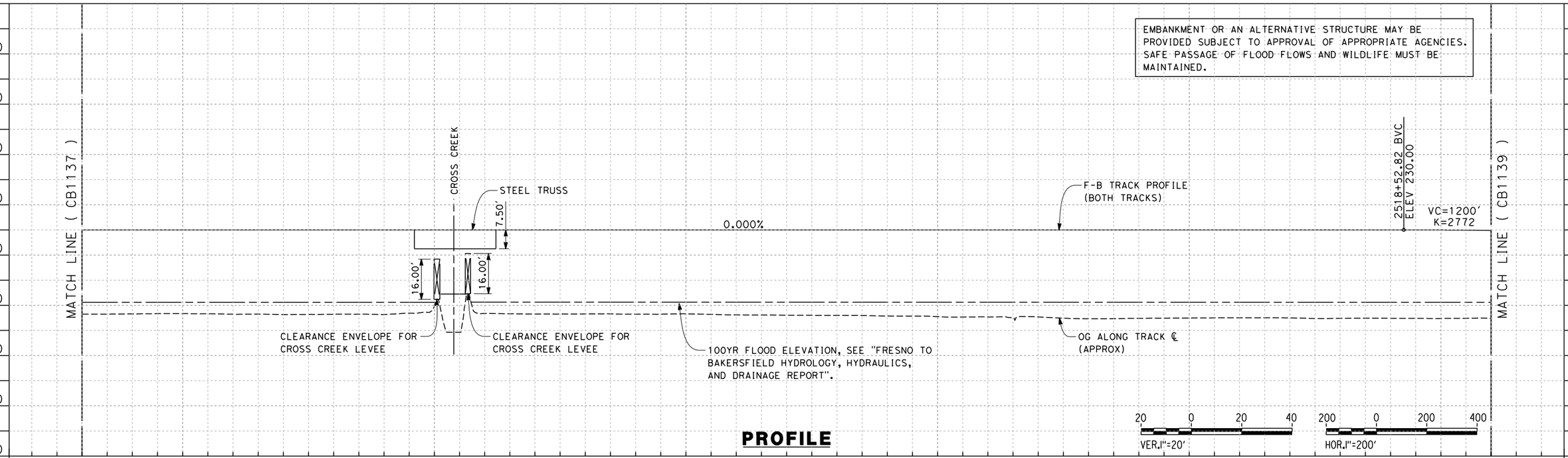
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096

PLAN

EMBANKMENT OR AN ALTERNATIVE STRUCTURE MAY BE PROVIDED SUBJECT TO APPROVAL OF APPROPRIATE AGENCIES. SAFE PASSAGE OF FLOOD FLOWS AND WILDLIFE MUST BE MAINTAINED.



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. WALKER
DRAWN BY P. TONKIN
CHECKED BY G. MEJIA
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

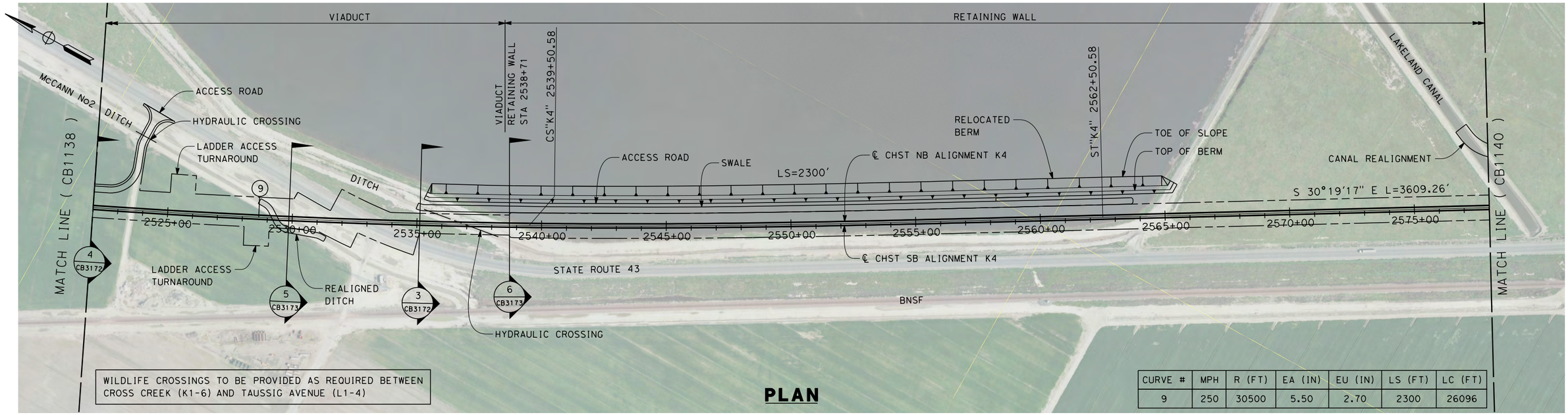
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2466+00 TO 2522+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1138
SCALE AS SHOWN
SHEET NO. 9 OF 13

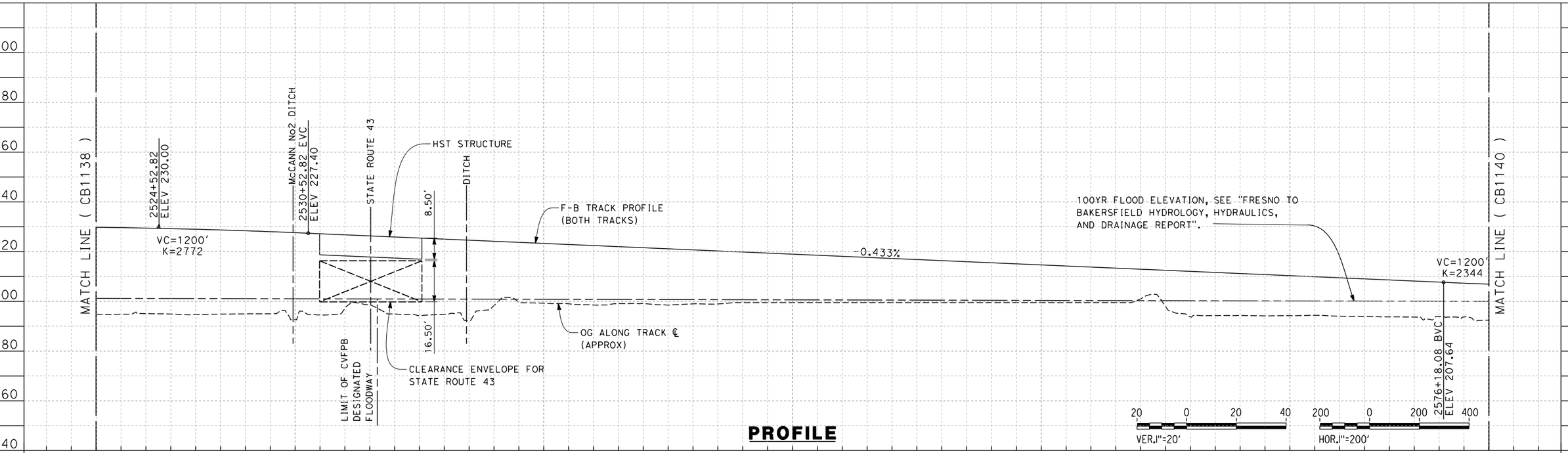
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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
9	250	30500	5.50	2.70	2300	26096



PROFILE

STATION	2522+00	2530+00	2540+00	2550+00	2560+00	2570+00	2578+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

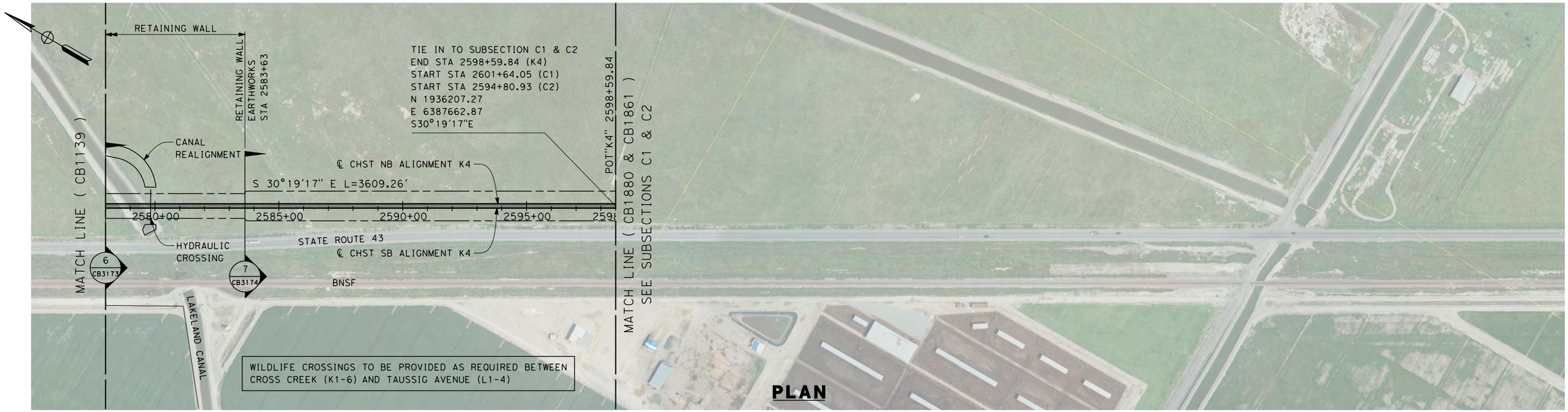
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

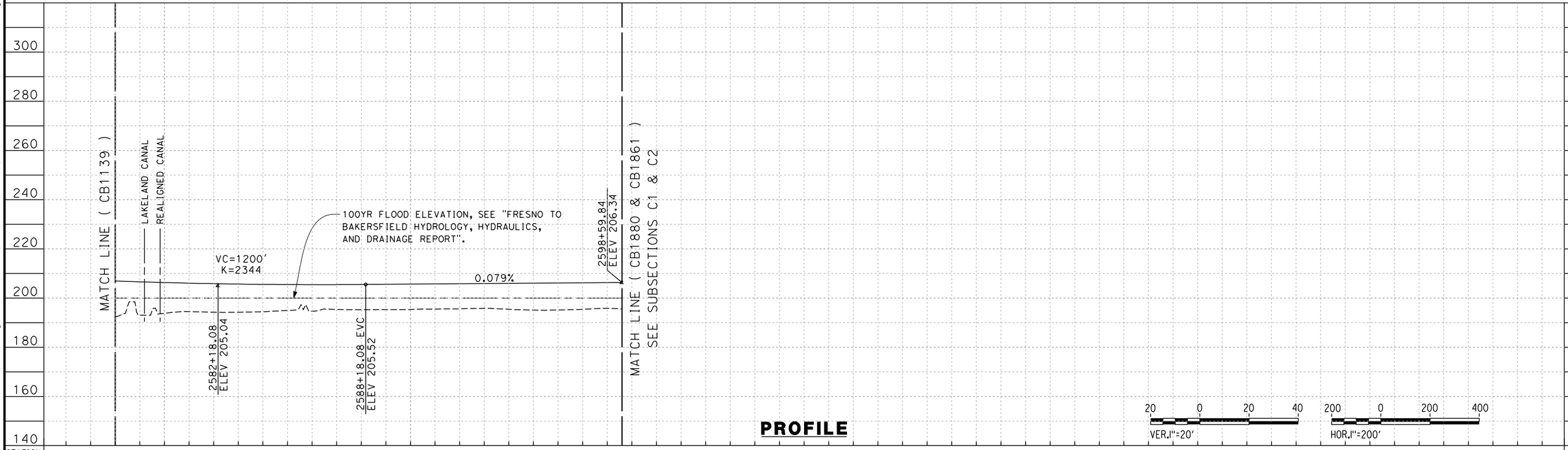
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2522+00 TO 2578+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1139
SCALE AS SHOWN
SHEET NO. 10 OF 15

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04/02/2014 - RFP No.: HSR13-57



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STA. 2578+00 TO 2598+60
PLAN AND PROFILE

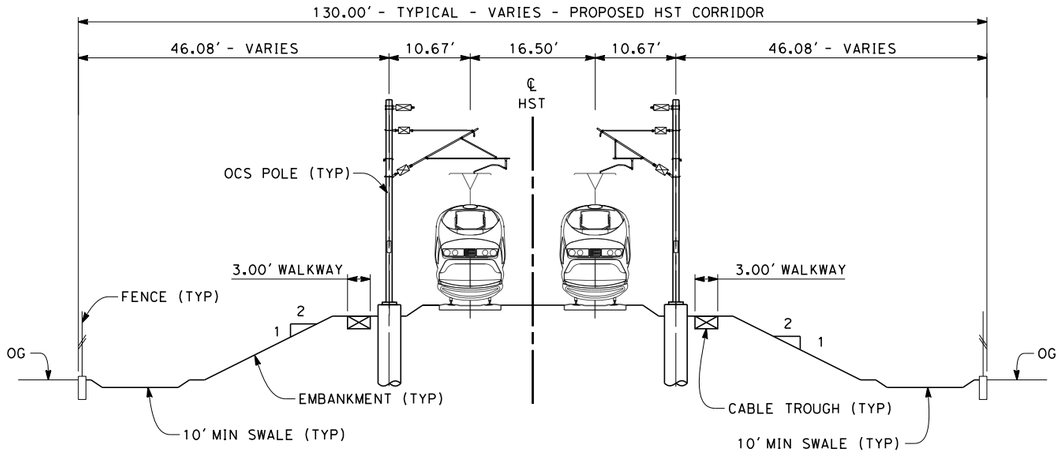
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1140
SCALE AS SHOWN
SHEET NO. 11 OF 15

04/02/2014 - RFP No.: HSR13-57

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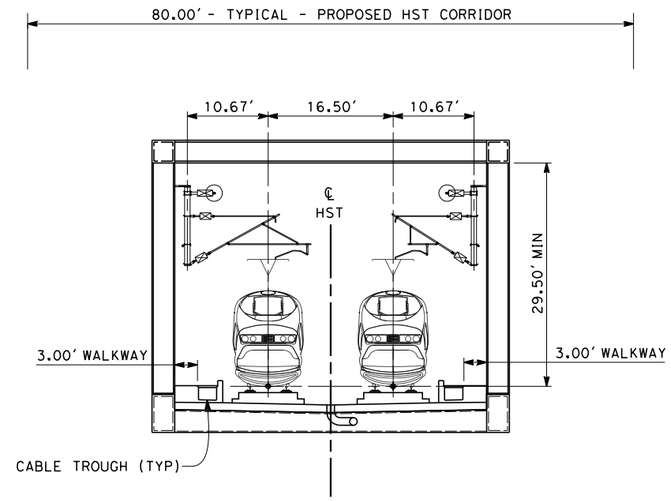
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN CURVE DATA TABLES



SECTION 1

TWIN TRACK - AT-GRADE WITH OPEN DRAINAGE
STA 2074+96 THROUGH STA 2240+32
STA 2246+03 THROUGH STA 2436+00



SECTION 2

TWIN TRACK - AERIAL STEEL TRUSS
STA 2240+32 THROUGH STA 2246+03
STA 2479+23 THROUGH STA 2482+45

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

alexander.poling 12/12/2013 1:14:20 PM c:\pwworking\hmm\external\alexander.poling-arup.com\d0125355\FB-CB-3171-K4 .dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

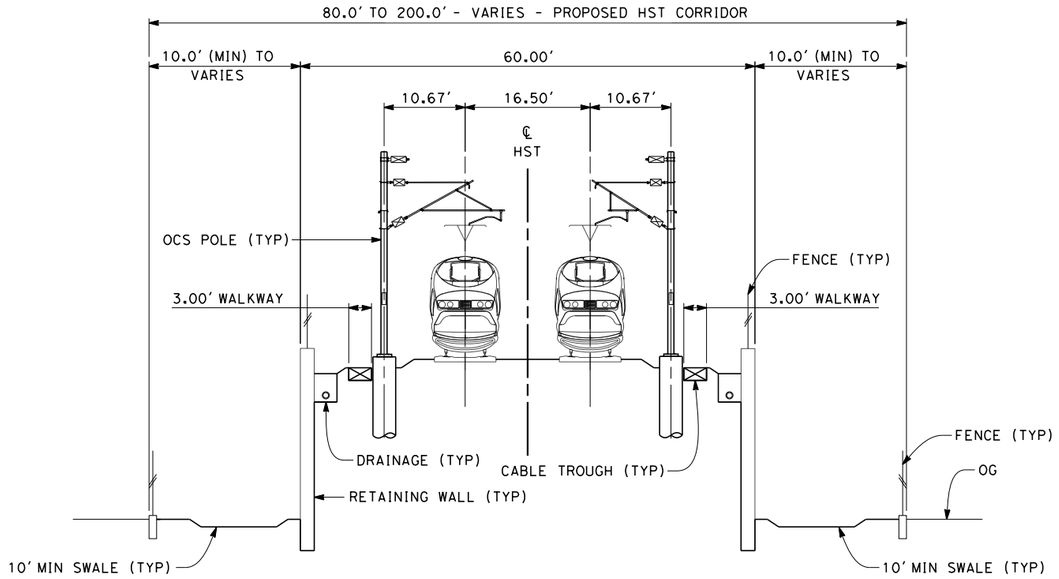
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3171
SCALE AS SHOWN
SHEET NO. 12 OF 15

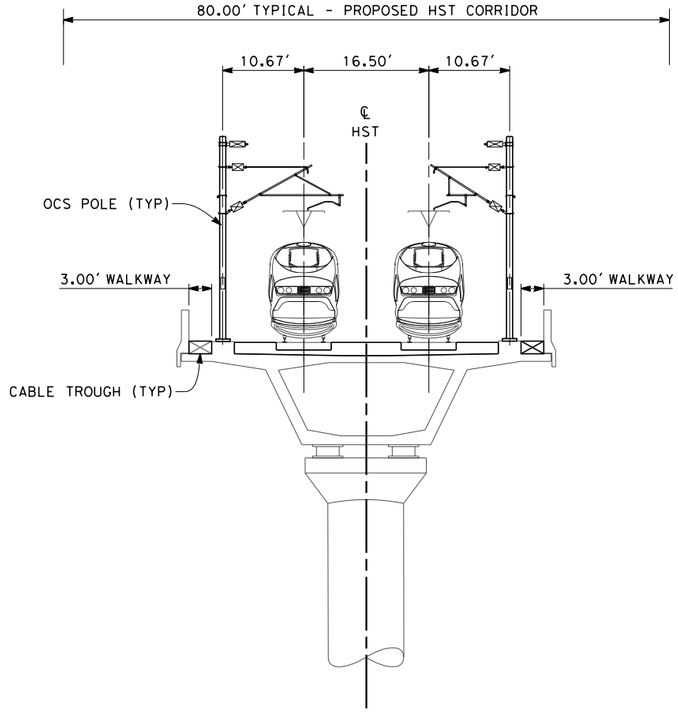
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN CURVE DATA TABLES



SECTION 3

TWIN TRACK - RETAINED EMBANKMENT
STA 2436+00 THROUGH STA 2446+81



SECTION 4

TWIN TRACK - AERIAL VIADUCT
STA 2446+81 THROUGH STA 2479+23
STA 2482+45 THROUGH STA 2529+86
STA 2535+11 THROUGH STA 2538+71

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

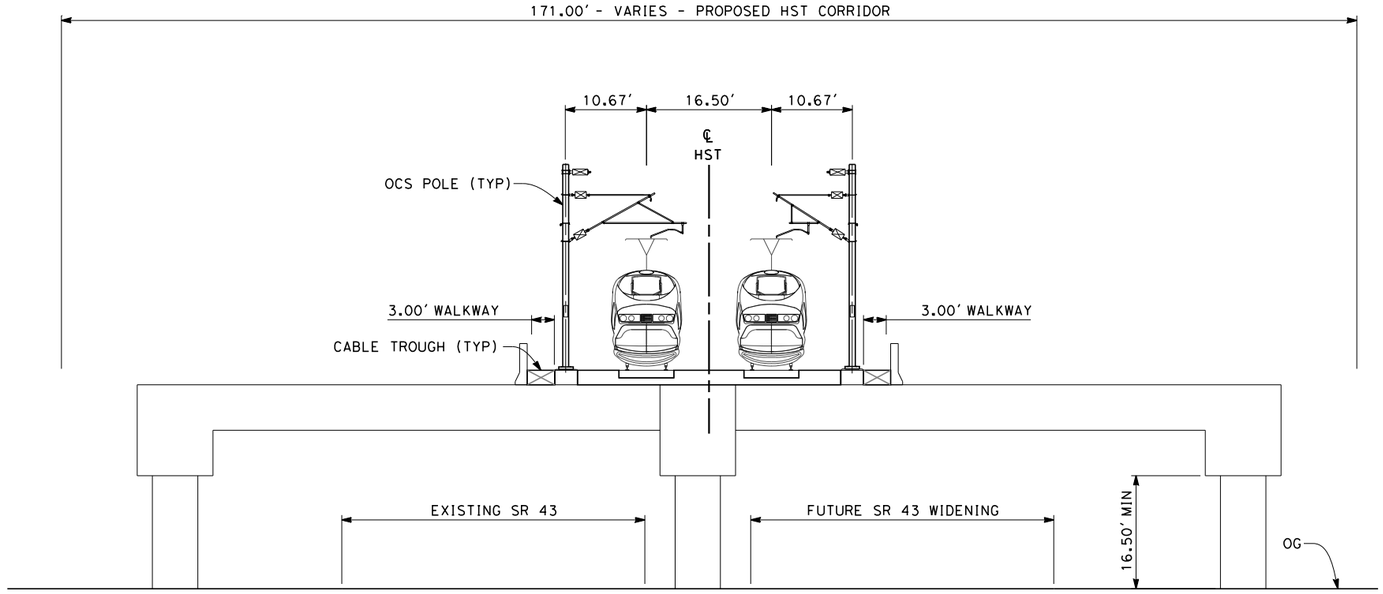
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3172
SCALE AS SHOWN
SHEET NO. 13 OF 15

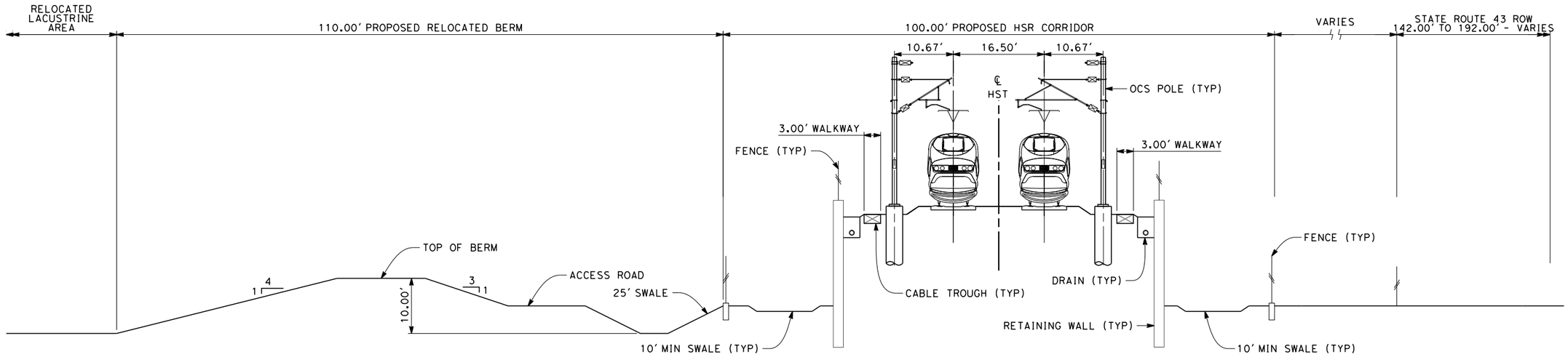


NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN CURVE DATA TABLES
4. PER CALTRANS STANDRAD, A HIGHWAY BARRIER IS REQUIRED NEXT TO A COLUMN BY THE REQUIREMENTS SET FORTH IN THE HIGHWAY DESIGN MANUAL. PIER PROTECTION REQUIRED FROM STA 2529+86 THROUGH STA 2535+11.

SECTION 5

TWIN TRACK AERIAL STRUCTURE OVER SR 43
STA 2529+86 THROUGH STA 2535+11



NOTE:
RELOCATED BERM PROPOSED FROM
STA 2534+10 THROUGH 2565+80

SECTION 6

TWIN TRACK ON RETAINED EMBANKMENT ADJACENT TO SR 43
STA 2538+71 THROUGH STA 2583+63

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. POLING
DRAWN BY: E. TANAKA
CHECKED BY: K. SEYMOUR
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
TYPICAL SECTIONS

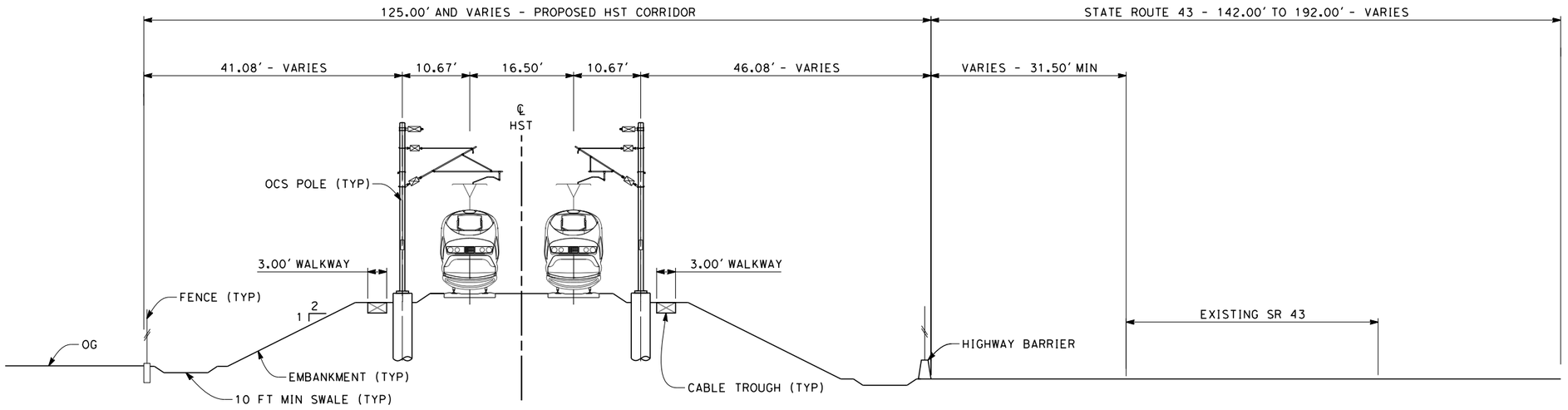
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3173
SCALE AS SHOWN
SHEET NO. 14 OF 15

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN CURVE DATA TABLES



SECTION 7

TWIN TRACK - ADJACENT TO SR 43
APPROX STA 2583+63 THROUGH STA 2598+60

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. TANAKA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3174
SCALE AS SHOWN
SHEET NO. 15 OF 15

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

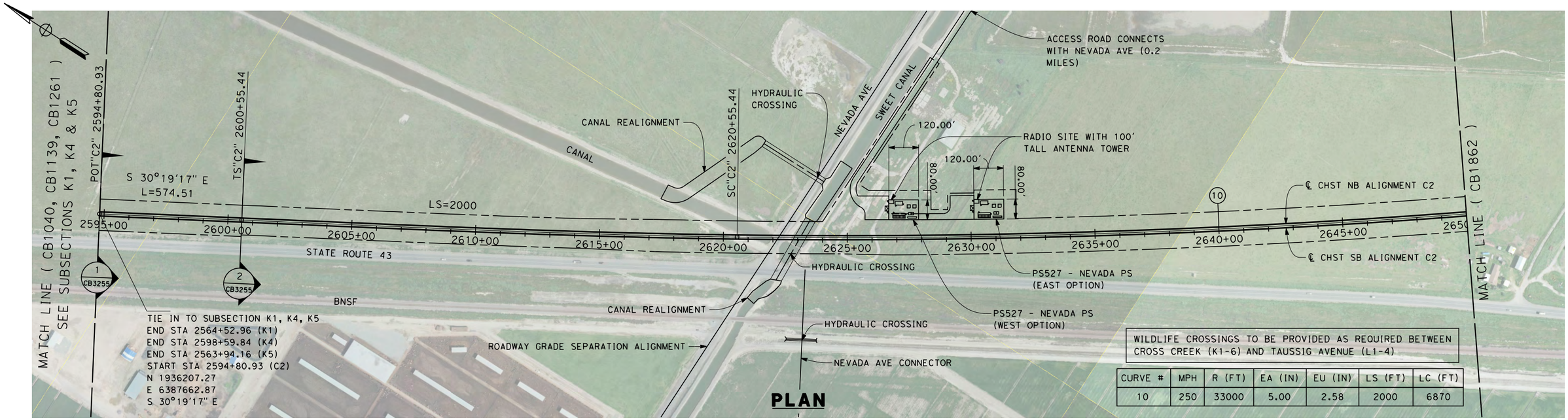
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA. 2954+81 TO 3096+00
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1850
SCALE AS SHOWN
SHEET NO. 1 OF 16

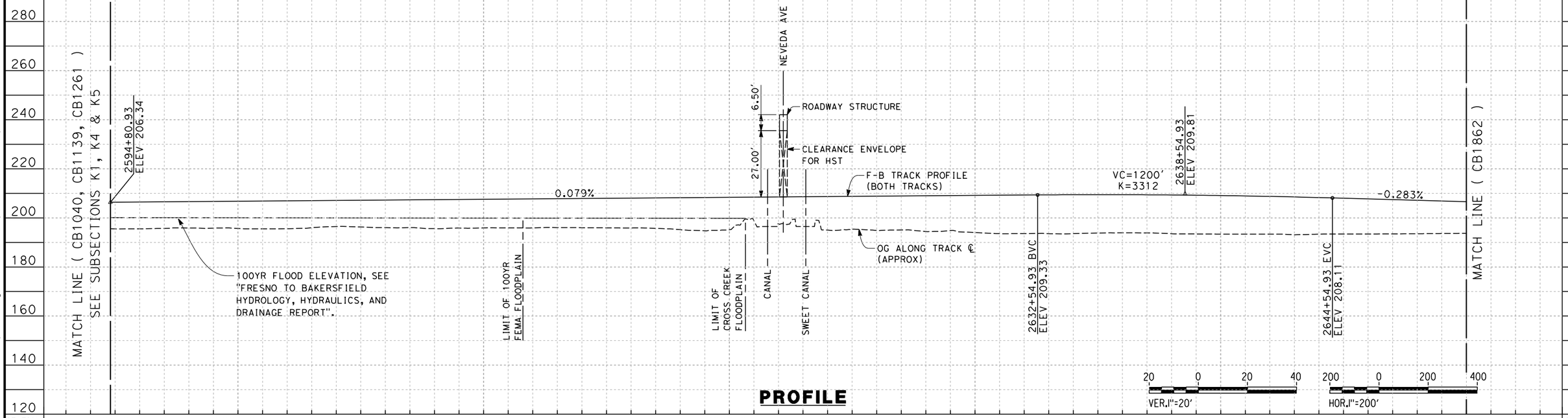
04/02/2014 - RFP No.: HSR13-57

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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
10	250	33000	5.00	2.58	2000	6870

PLAN



PROFILE

STATION	2594+81	2600+00	2610+00	2620+00	2630+00	2640+00	2650+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

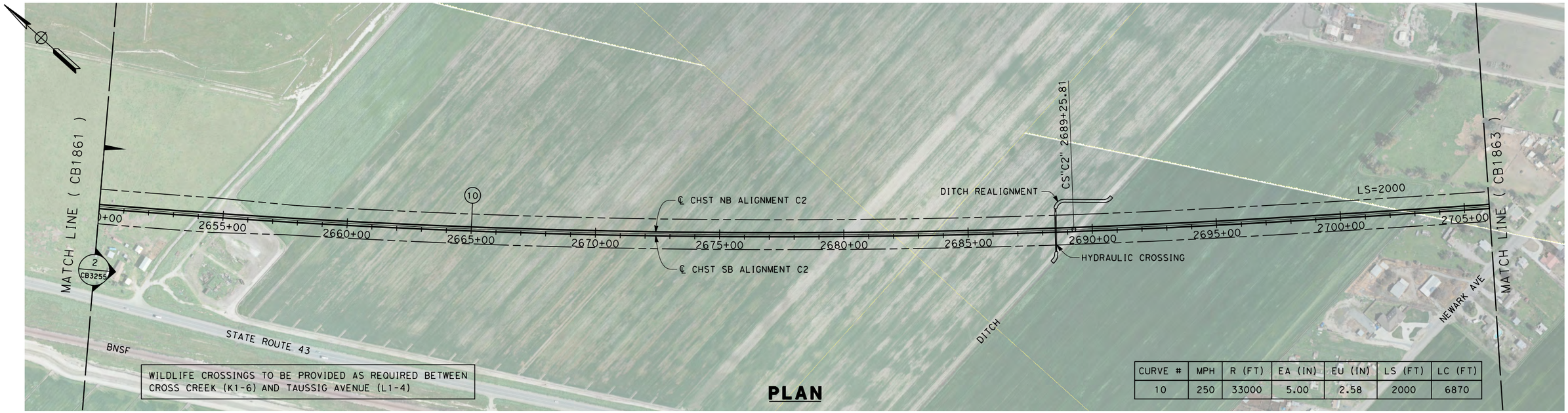
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2594+81 TO 2650+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1861
SCALE AS SHOWN
SHEET NO. 2 OF 16

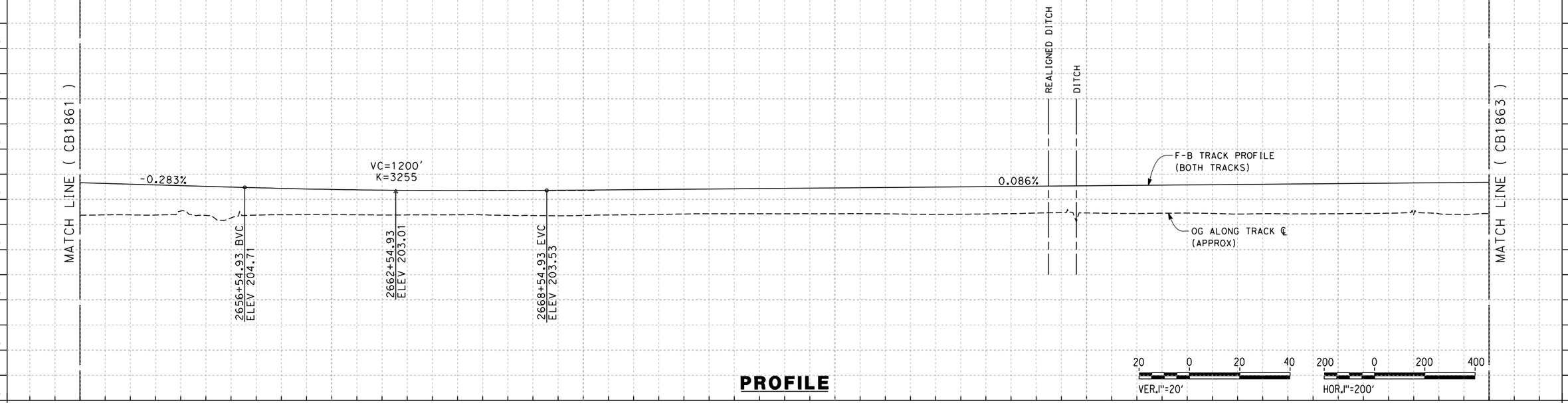
RFP No.: HSR13-57
04/02/2014

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paul.tonkin



CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
10	250	33000	5.00	2.58	2000	6870

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

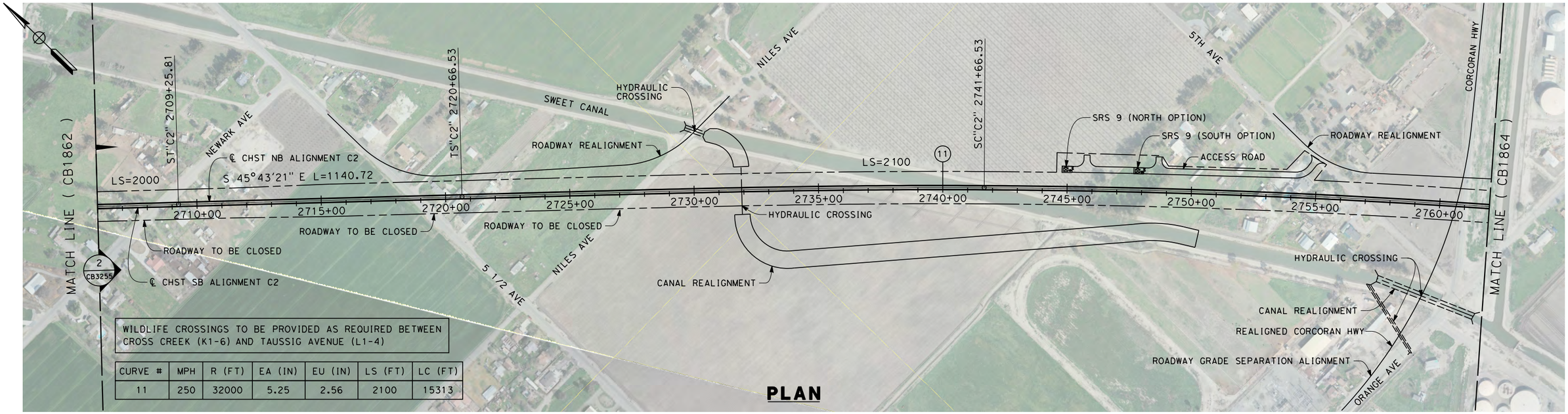
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYAPSS SUBSECTION
ALIGNMENT C2
STA 2650+00 TO 2706+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1862
SCALE AS SHOWN
SHEET NO. 3 OF 16

04/02/2014 - RFP No.: HSR13-57

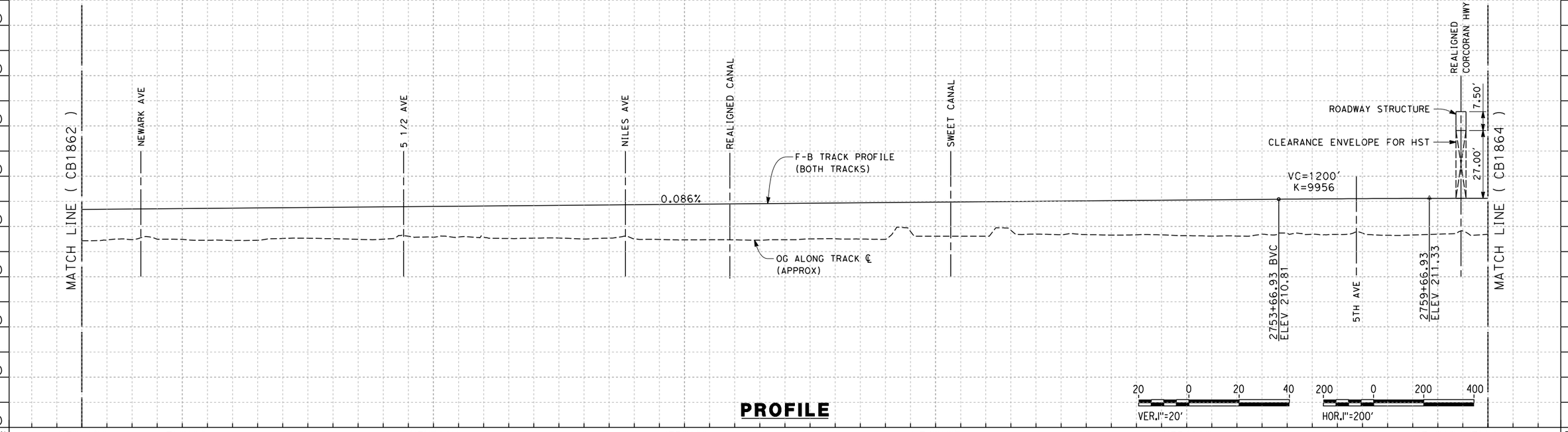
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WILDLIFE CROSSINGS TO BE PROVIDED AS REQUIRED BETWEEN CROSS CREEK (K1-6) AND TAUSSIG AVENUE (L1-4)

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
11	250	32000	5.25	2.56	2100	15313

PLAN



PROFILE

STATION	2706+00	2710+00	2720+00	2730+00	2740+00	2750+00	2760+00	2762+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

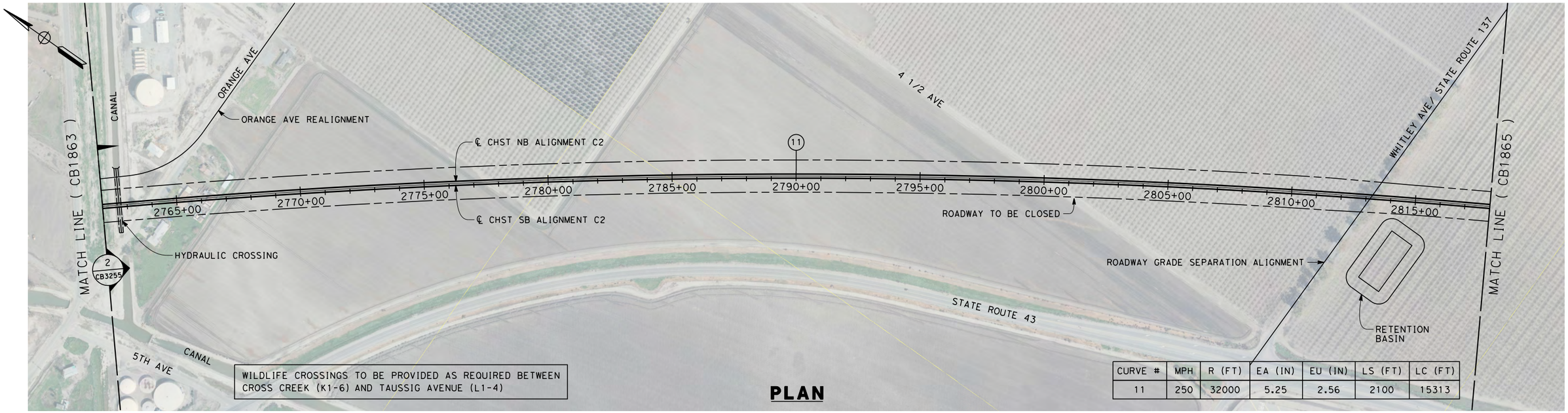
CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2706+00 TO 2762+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1863
SCALE AS SHOWN
SHEET NO. 4 OF 16

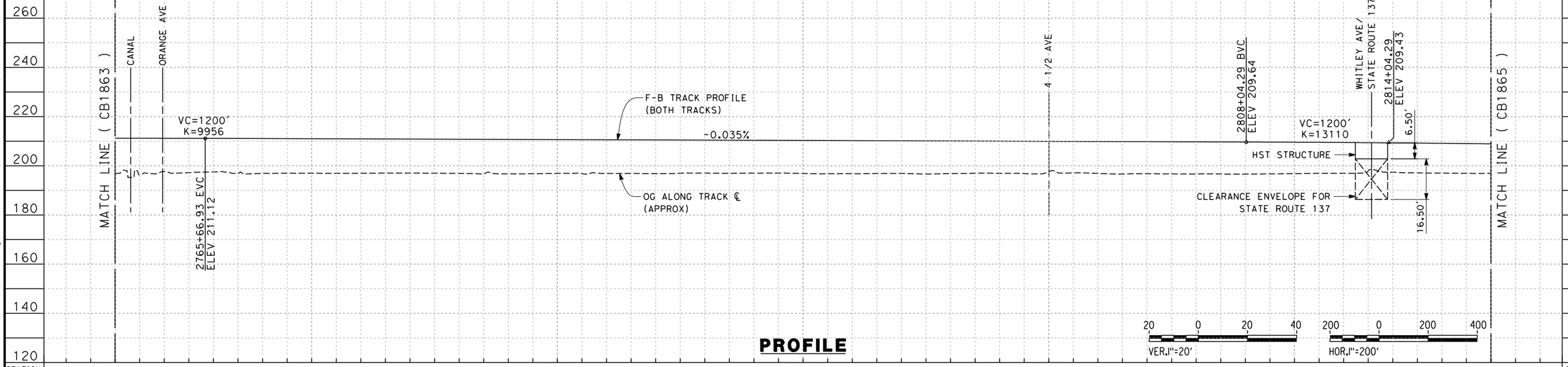
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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
11	250	32000	5.25	2.56	2100	15313



PROFILE

STATION	2762+00	2770+00	2780+00	2790+00	2800+00	2810+00	2818+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

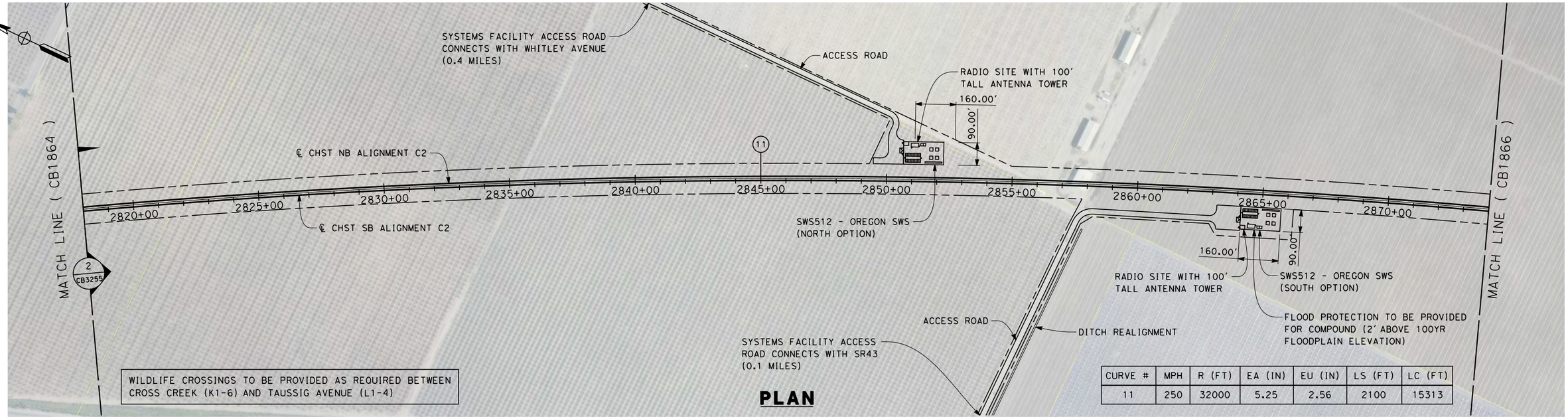
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2762+00 TO 2818+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1864
SCALE AS SHOWN
SHEET NO. 5 OF 16

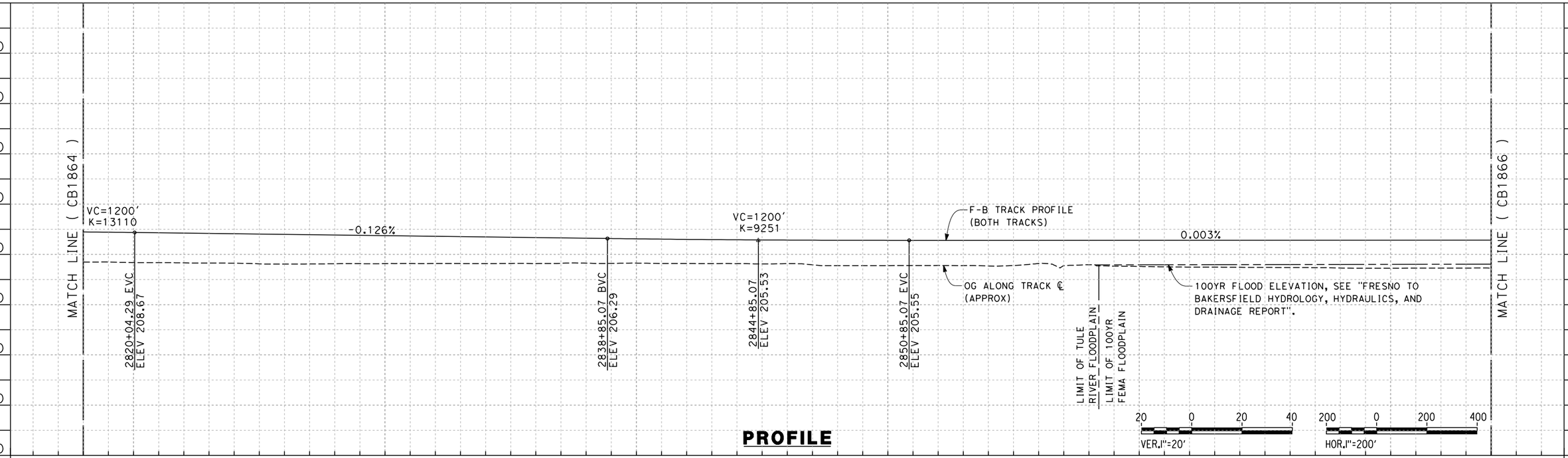
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
11	250	32000	5.25	2.56	2100	15313

PLAN



PROFILE

STATION	2818+00	2820+00	2830+00	2840+00	2850+00	2860+00	2870+00	2874+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

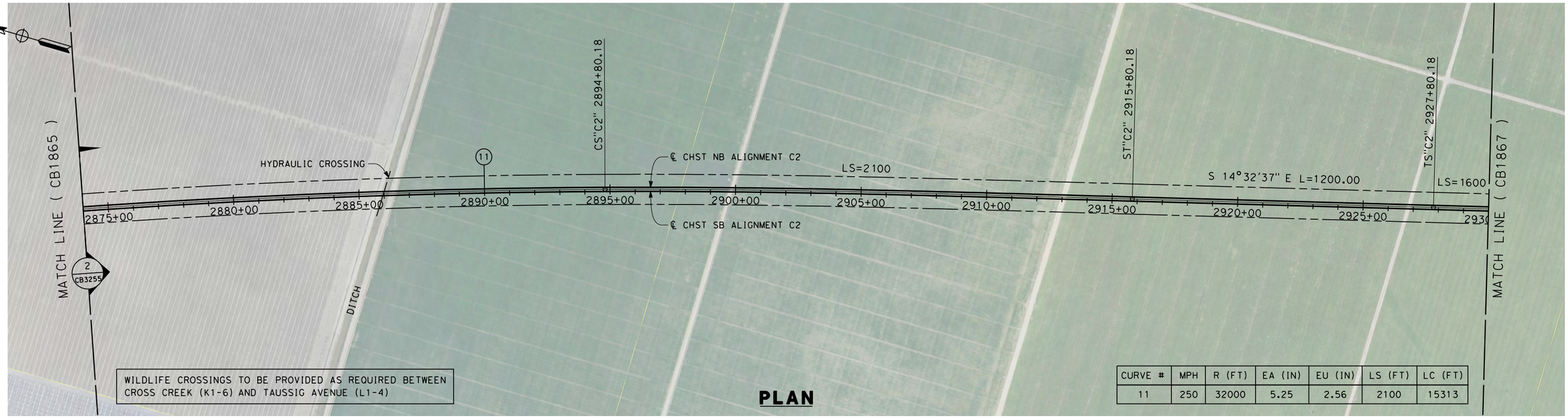
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2818+00 TO 2874+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1865
SCALE AS SHOWN
SHEET NO. 6 OF 16

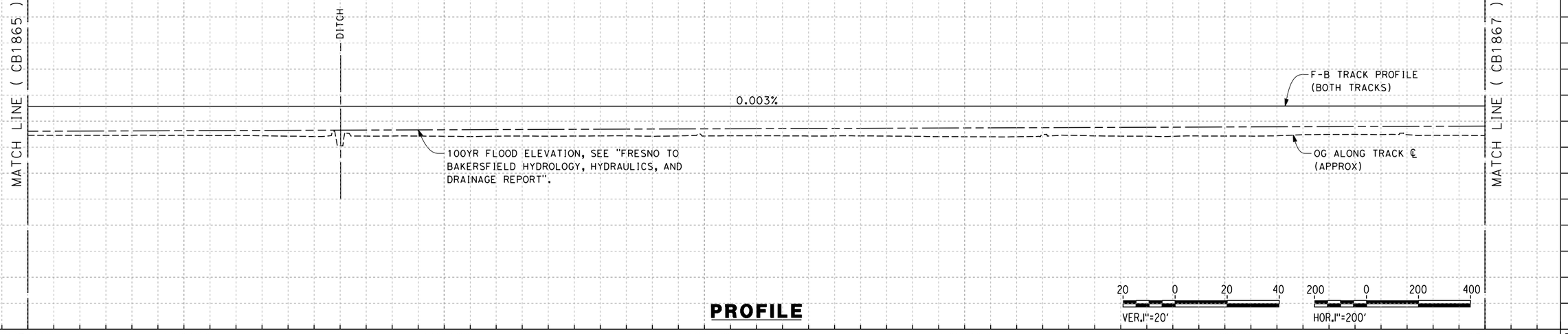
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
11	250	32000	5.25	2.56	2100	15313

PLAN



PROFILE

STATION	2874+00	2880+00	2890+00	2900+00	2910+00	2920+00	2930+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

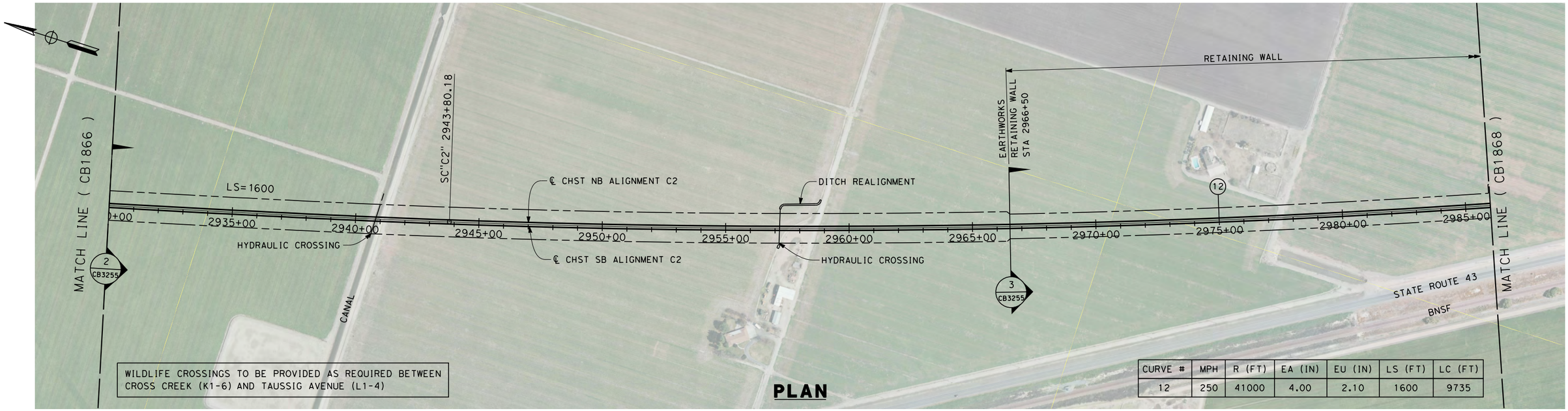
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2874+00 TO 2930+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1866
SCALE AS SHOWN
SHEET NO. 7 OF 16

04/02/2014 - RFP No.: HSR13-57

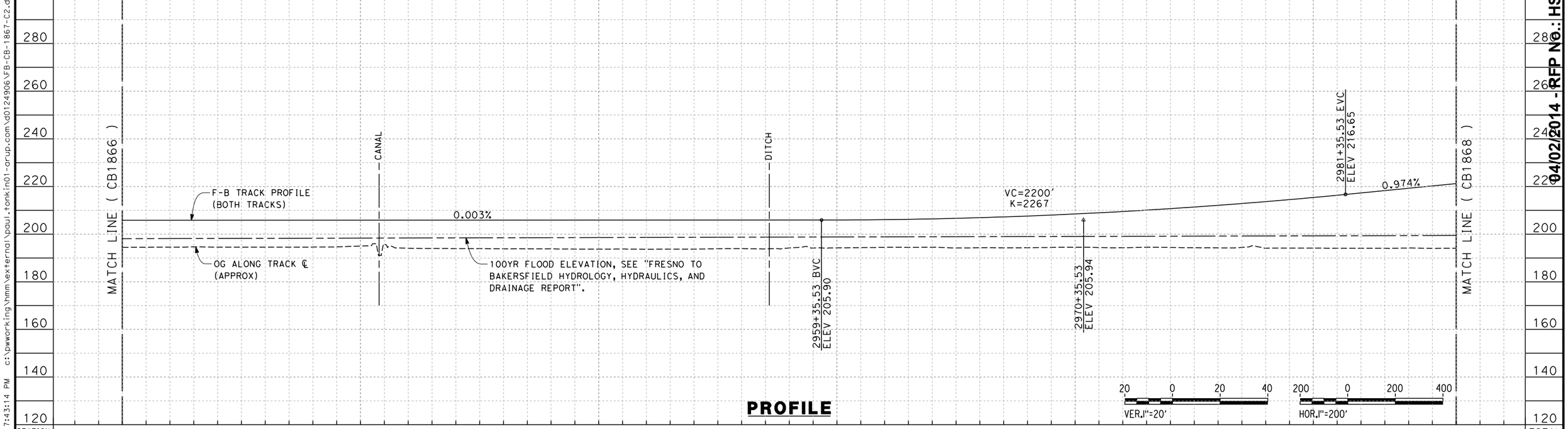
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WILDLIFE CROSSINGS TO BE PROVIDED AS REQUIRED BETWEEN CROSS CREEK (K1-6) AND TAUSSIG AVENUE (L1-4)

PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
12	250	41000	4.00	2.10	1600	9735



PROFILE

STATION	2930+00	2940+00	2950+00	2960+00	2970+00	2980+00	2986+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

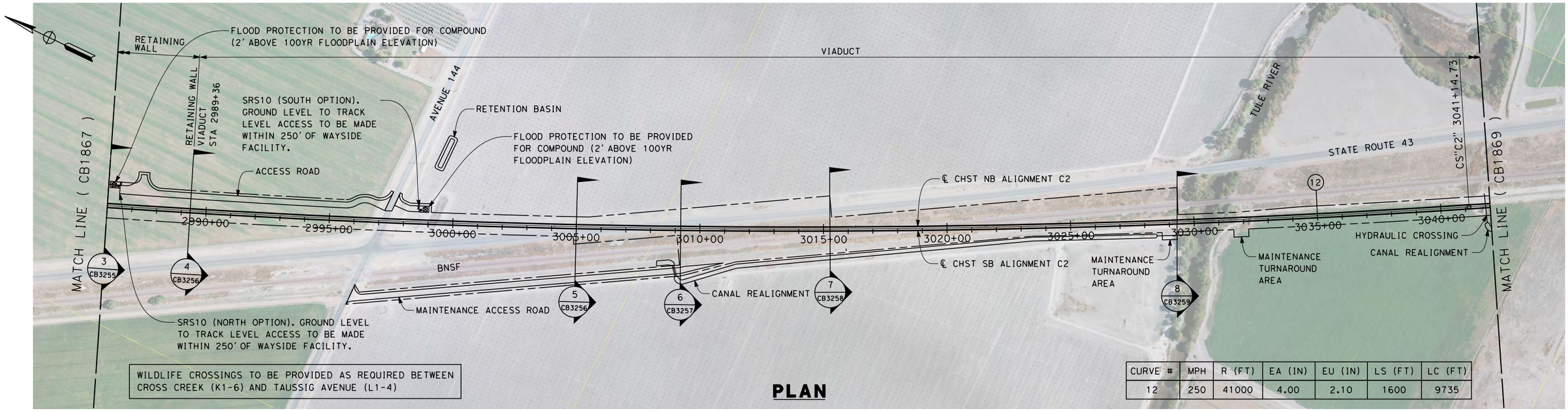
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2930+00 TO 2986+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1867
SCALE AS SHOWN
SHEET NO. 8 OF 16

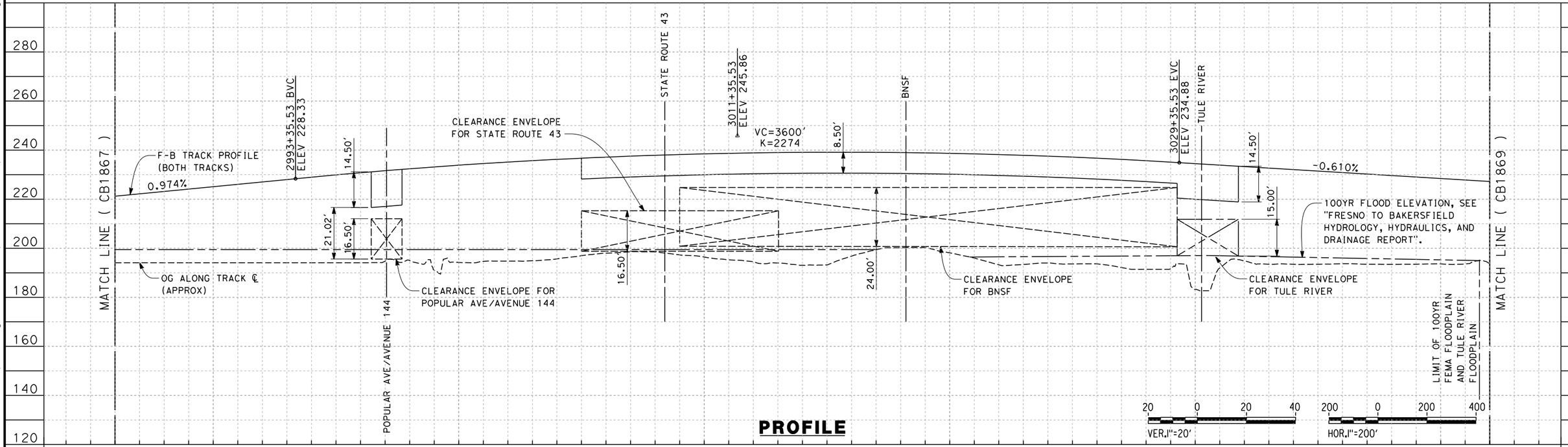
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
12	250	41000	4.00	2.10	1600	9735

PLAN



PROFILE

STATION	2986+00	2990+00	3000+00	3010+00	3020+00	3030+00	3040+00	3042+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

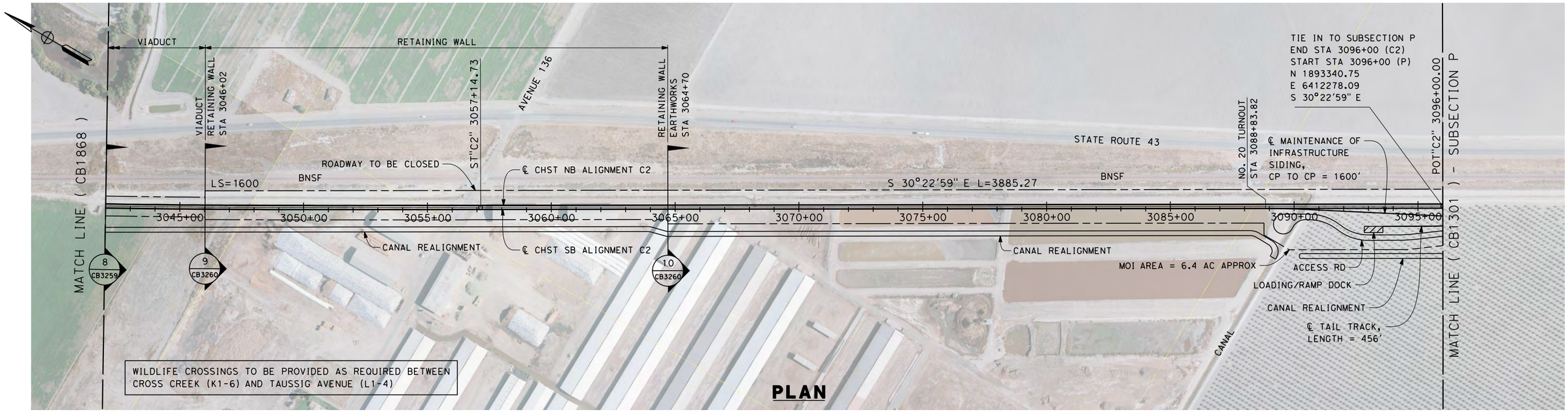
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 2986+00 TO 3042+00
PLAN AND PROFILE

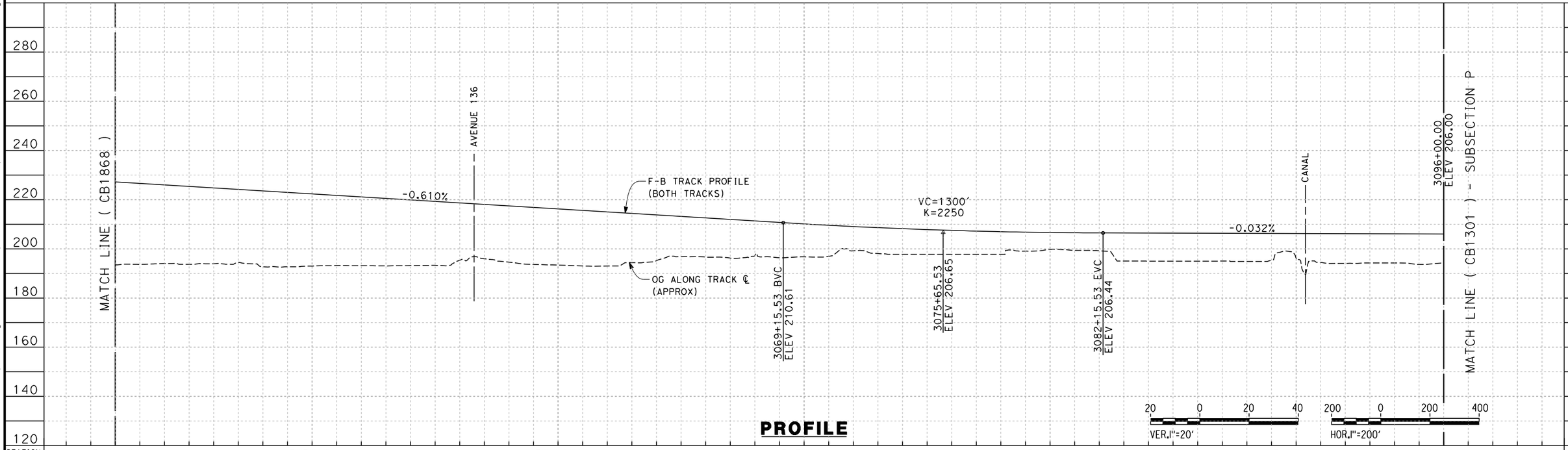
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DRAWING NO. CB1868
SCALE AS SHOWN
SHEET NO. 9 OF 16

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	3042+00	3050+00	3060+00	3070+00	3080+00	3090+00	3096+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STA 3042+00 TO 3096+00
PLAN AND PROFILE

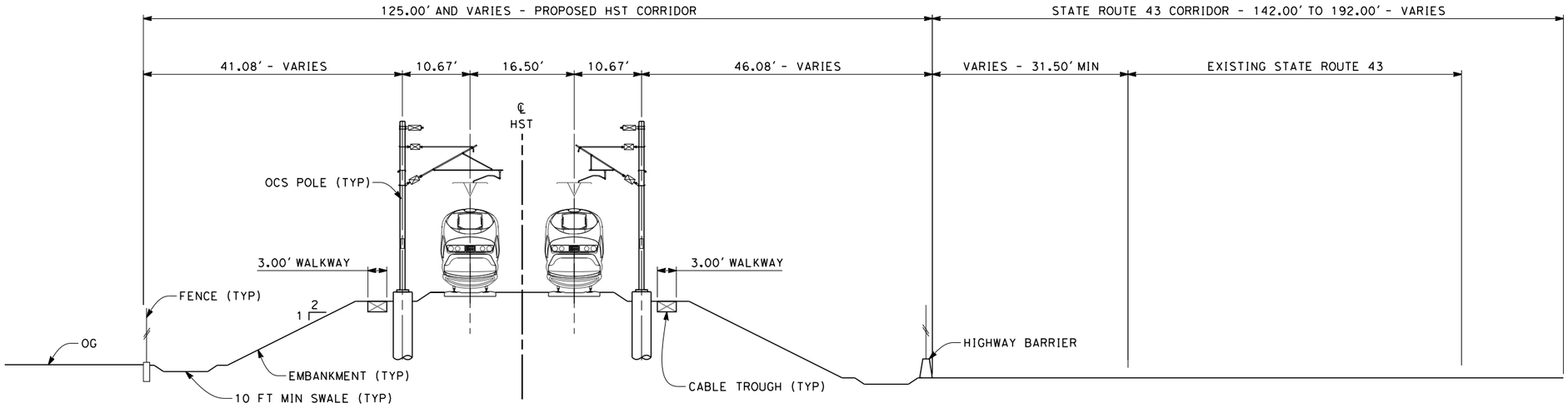
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DRAWING NO. CB1869
SCALE AS SHOWN
SHEET NO. 10 OF 16

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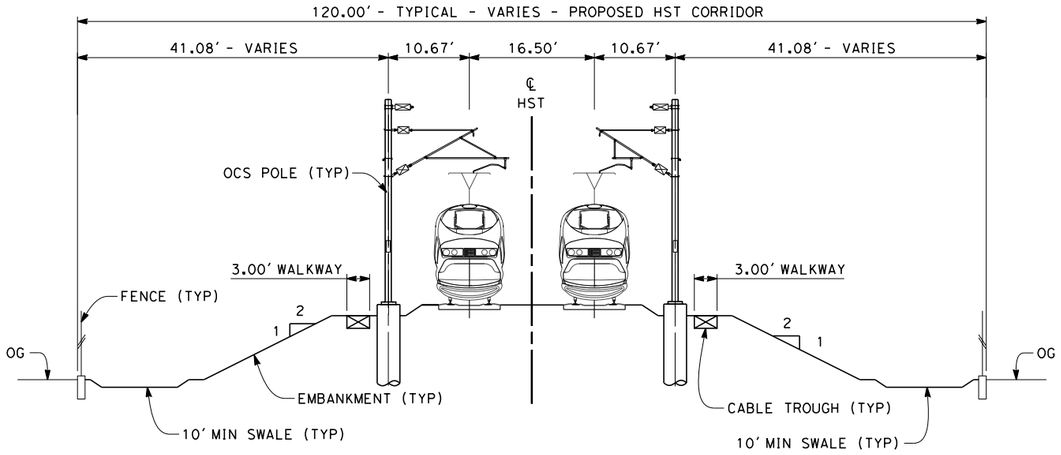
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.



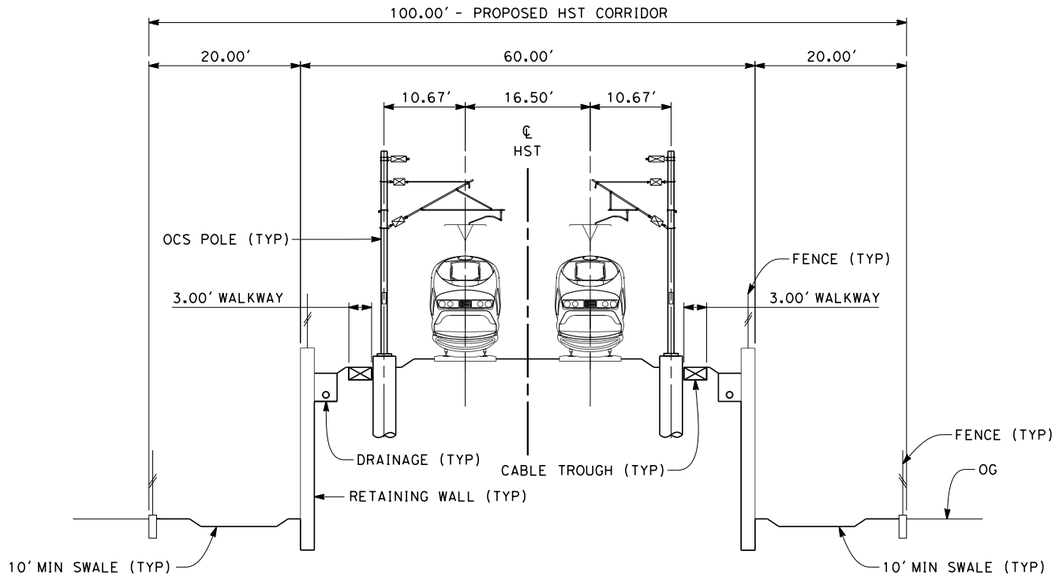
SECTION 1

TWIN TRACK - AT-GRADE ADJACENT TO STATE ROUTE 43
STA 2594+81 THROUGH STA 2600+55



SECTION 2

TWIN TRACK - AT-GRADE WITH OPEN DRAINAGE
STA 2600+55 THROUGH STA 2966+50



SECTION 3

TWIN TRACK - RETAINED EMBANKMENT
STA 2966+50 THROUGH STA 2989+36

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

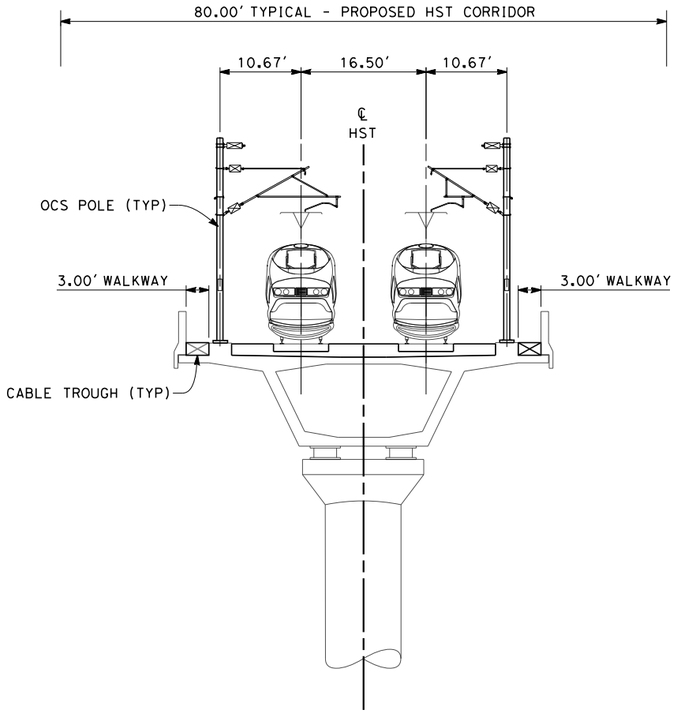
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

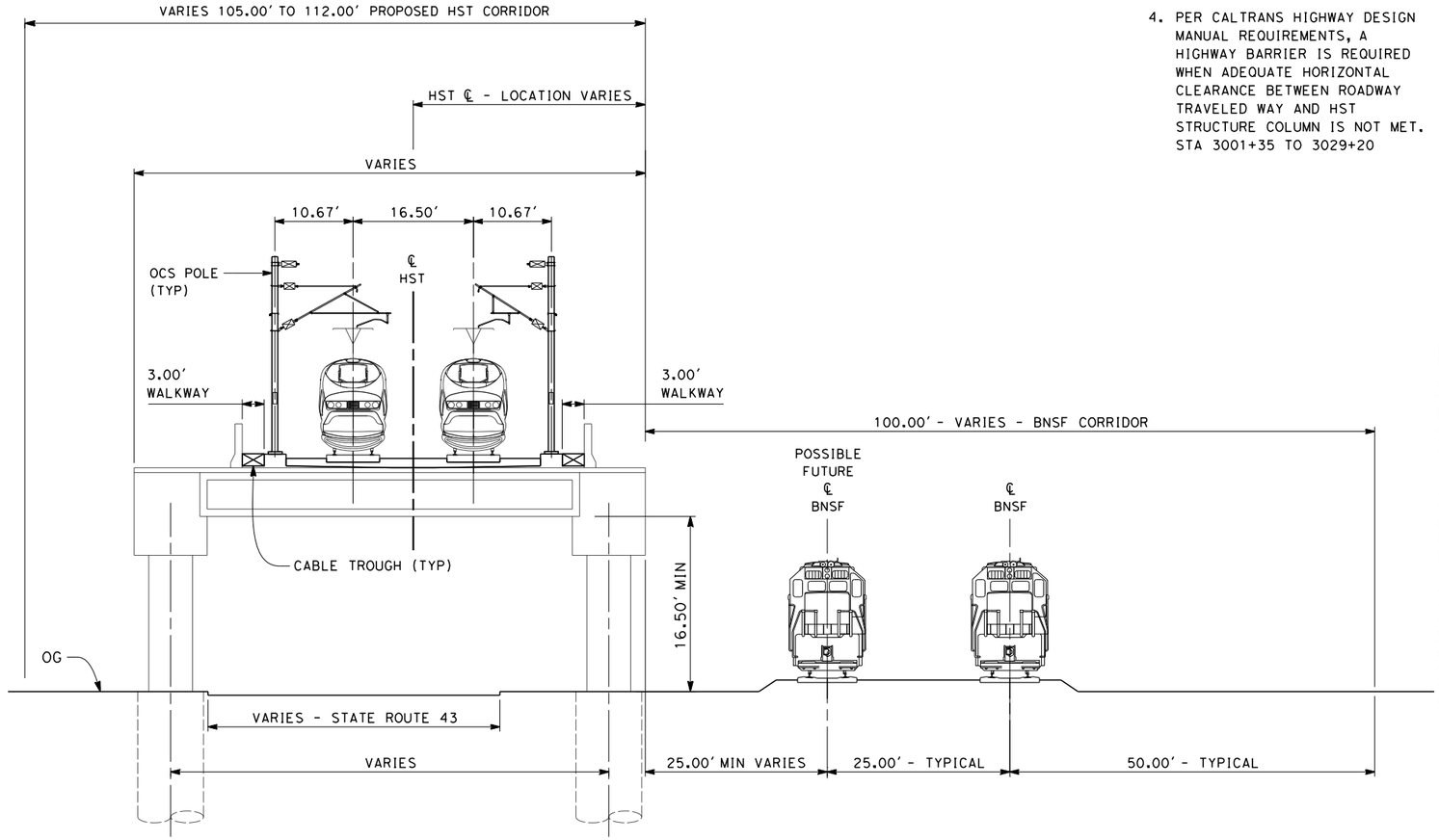
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3255
SCALE AS SHOWN
SHEET NO. 11 OF 16

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SECTION 4

TWIN TRACK - AERIAL VIADUCT
STA 2989+36 THROUGH STA 3005+00



SECTION 5

TWIN TRACK - ELEVATED SLAB OVER HIGHWAY
STA 3005+00 THROUGH STA 3009+00

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.
4. PER CALTRANS HIGHWAY DESIGN MANUAL REQUIREMENTS, A HIGHWAY BARRIER IS REQUIRED WHEN ADEQUATE HORIZONTAL CLEARANCE BETWEEN ROADWAY TRAVELED WAY AND HST STRUCTURE COLUMN IS NOT MET. STA 3001+35 TO 3029+20

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

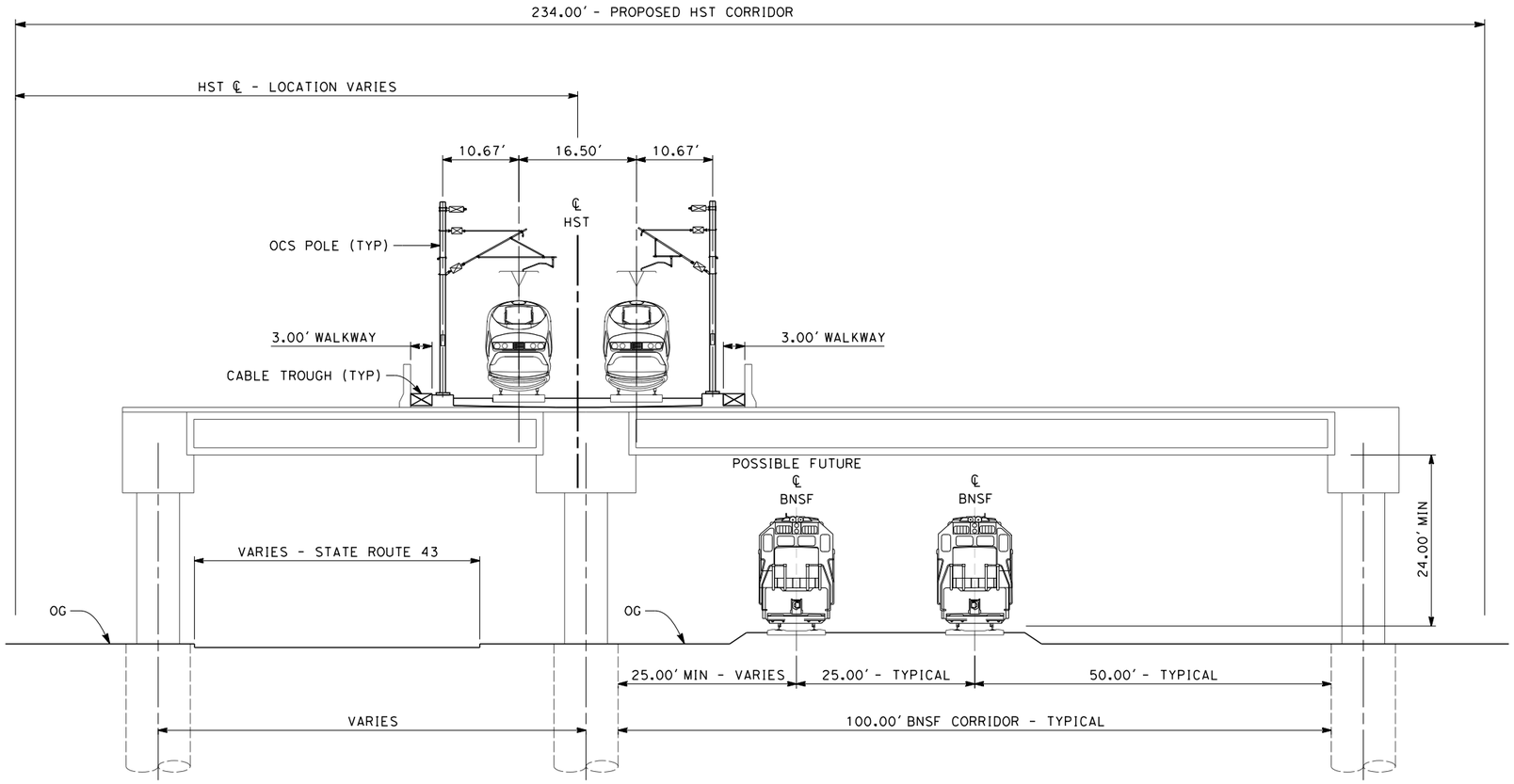
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3256
SCALE AS SHOWN
SHEET NO. 12 OF 16

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.
4. PER CALTRANS HIGHWAY DESIGN MANUAL REQUIREMENTS, A HIGHWAY BARRIER IS REQUIRED WHEN ADEQUATE HORIZONTAL CLEARANCE BETWEEN ROADWAY TRAVELED WAY AND HST STRUCTURE COLUMN IS NOT MET. STA 3001+35 TO 3029+20



SECTION 6

TWIN TRACK - ELEVATED SLAB OVER HIGHWAY AND BNSF
STA 3009+00 THROUGH STA 3015+20

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

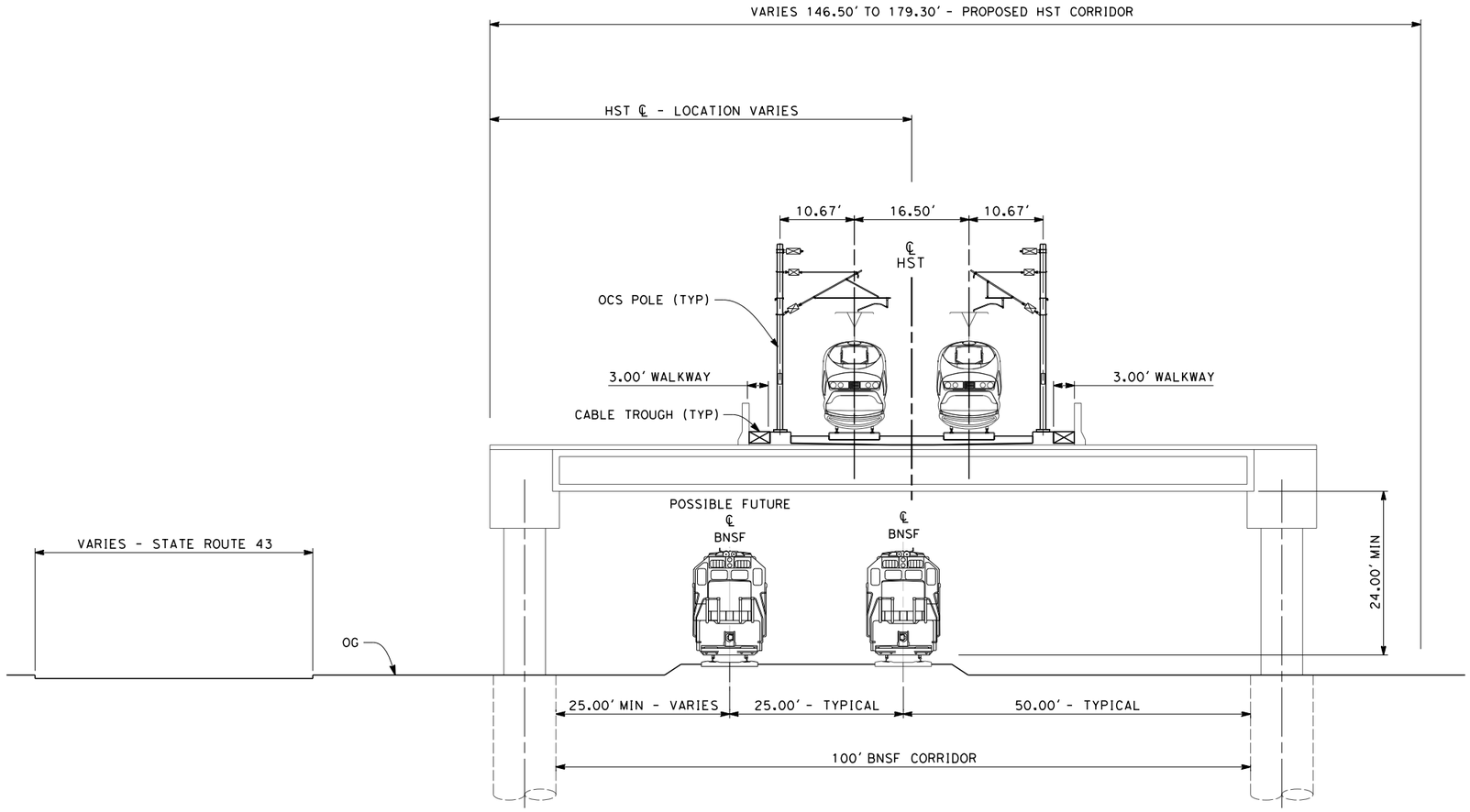
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3257
SCALE AS SHOWN
SHEET NO. 13 OF 16

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.
4. PER CALTRANS HIGHWAY DESIGN MANUAL REQUIREMENTS, A HIGHWAY BARRIER IS REQUIRED WHEN ADEQUATE HORIZONTAL CLEARANCE BETWEEN ROADWAY TRAVELED WAY AND HST STRUCTURE COLUMN IS NOT MET. STA 3001+35 TO 3029+20



SECTION 7

TWIN TRACK - ELEVATED SLAB OVER BNSF
STA 3015+20 THROUGH STA 3029+26

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

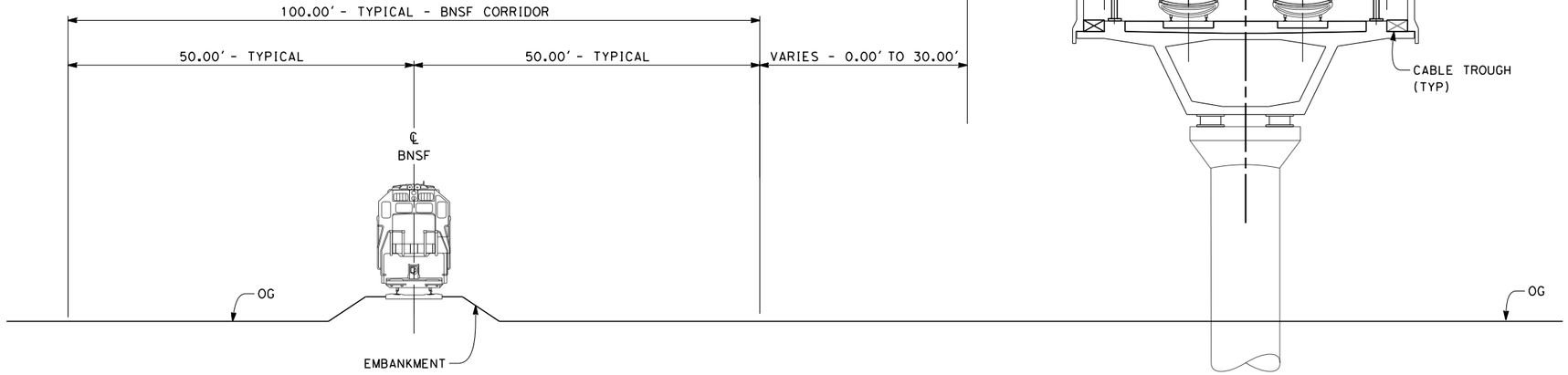
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3258
SCALE AS SHOWN
SHEET NO. 14 OF 16

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NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.



SECTION 8

TWIN TRACK - AERIAL VIADUCT ADJACENT TO BNSF
STA 3029+26 THROUGH STA 3046+02

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

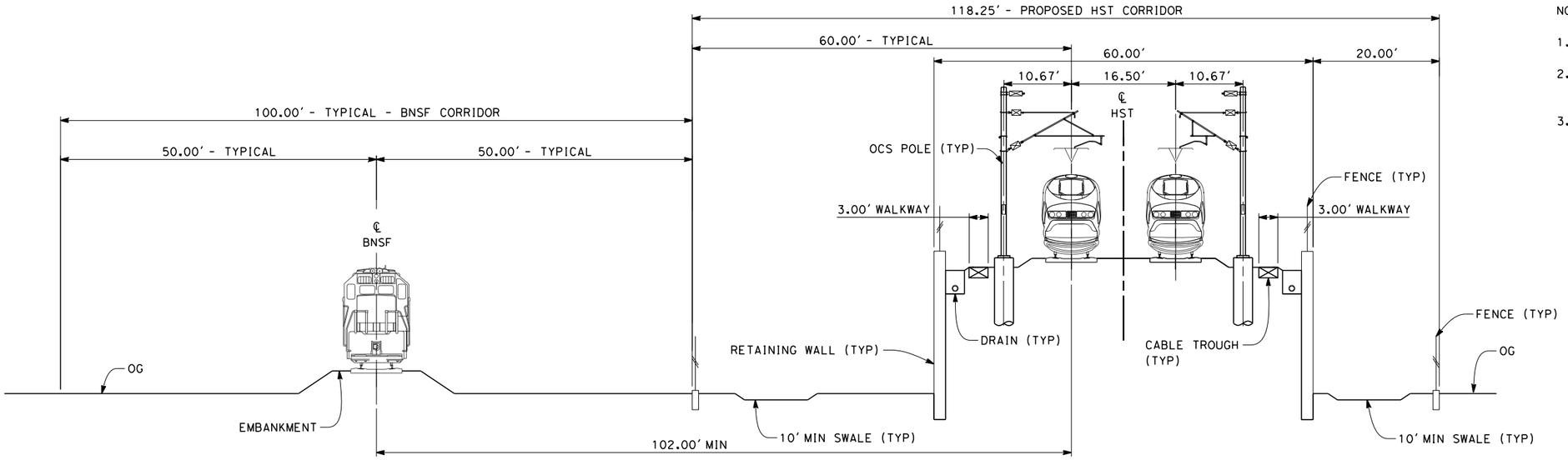
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

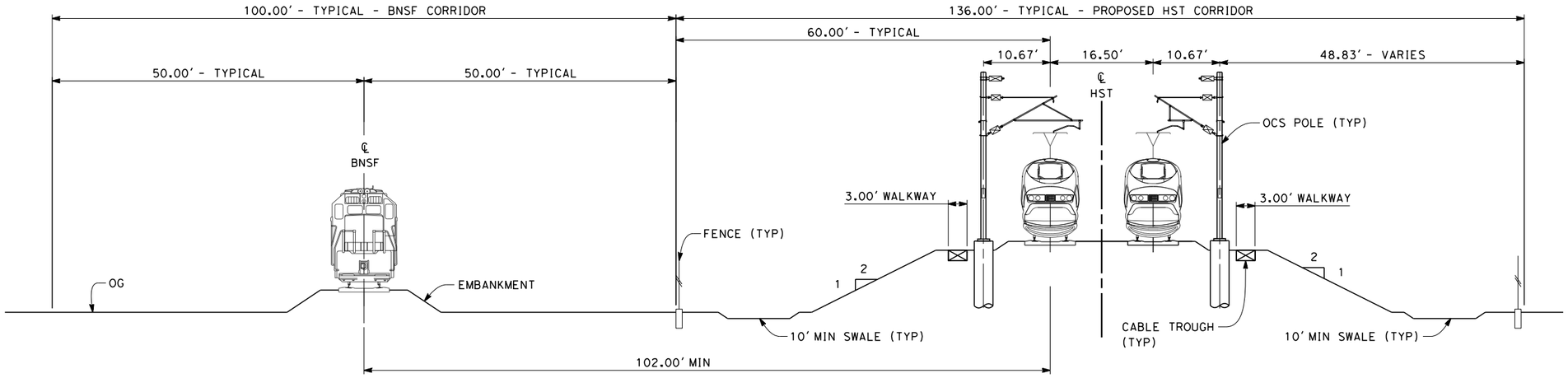
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3259
SCALE AS SHOWN
SHEET NO. 15 OF 16

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SECTION 9

TWIN TRACK - RETAINED EMBANKMENT ADJACENT TO BNSF
STA 3046+02 THROUGH STA 3064+70



SECTION 10

TWIN TRACK - ADJACENT TO BNSF
STA 3064+70 THROUGH STA 3096+00

10 0 10 20
1"=10'

NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY P. TONKIN
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3260
SCALE AS SHOWN
SHEET NO. 16 OF 16

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

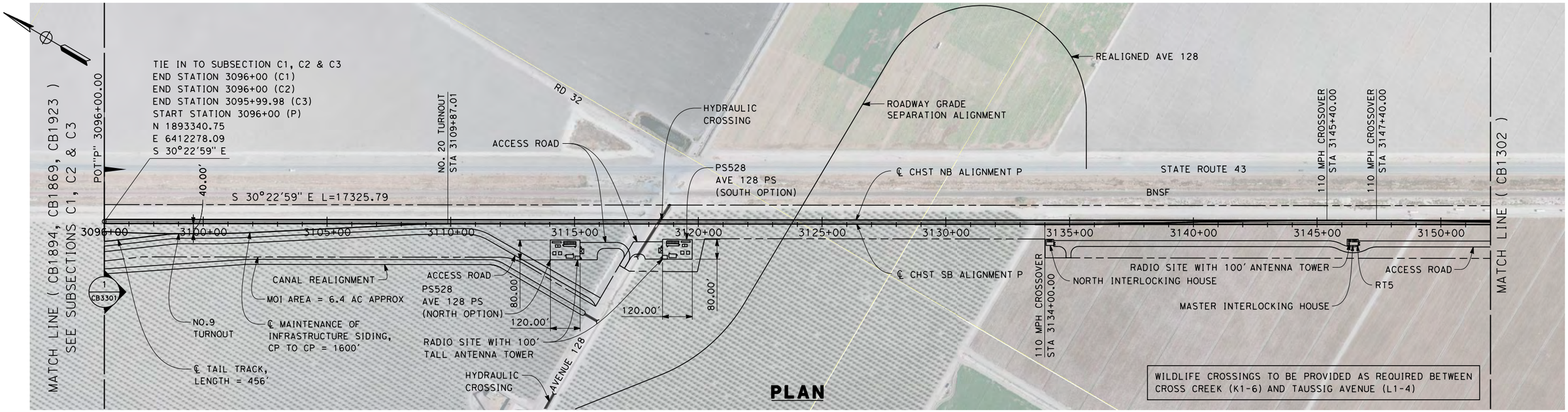
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

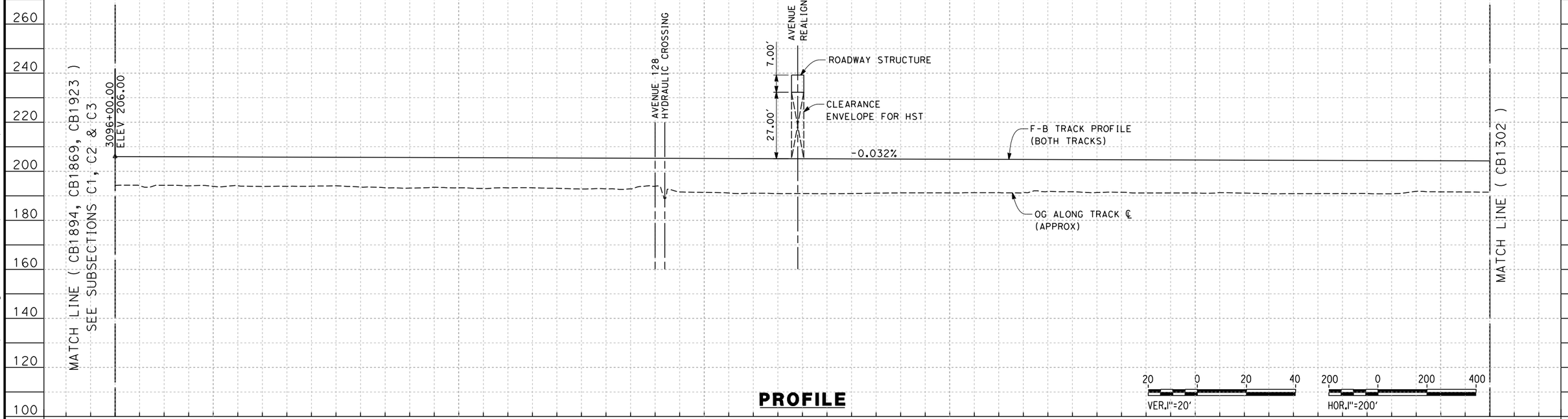
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
STA. 3096+00 TO 3459+25
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1300
SCALE AS SHOWN
SHEET NO. 1 OF 9

eron.sudhousen 12/10/2013 9:23:12 AM c:\pwworking\hmm\external\eron.sudhousen-grup.com\d0123770\FB-CB-1300-P.dgn



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

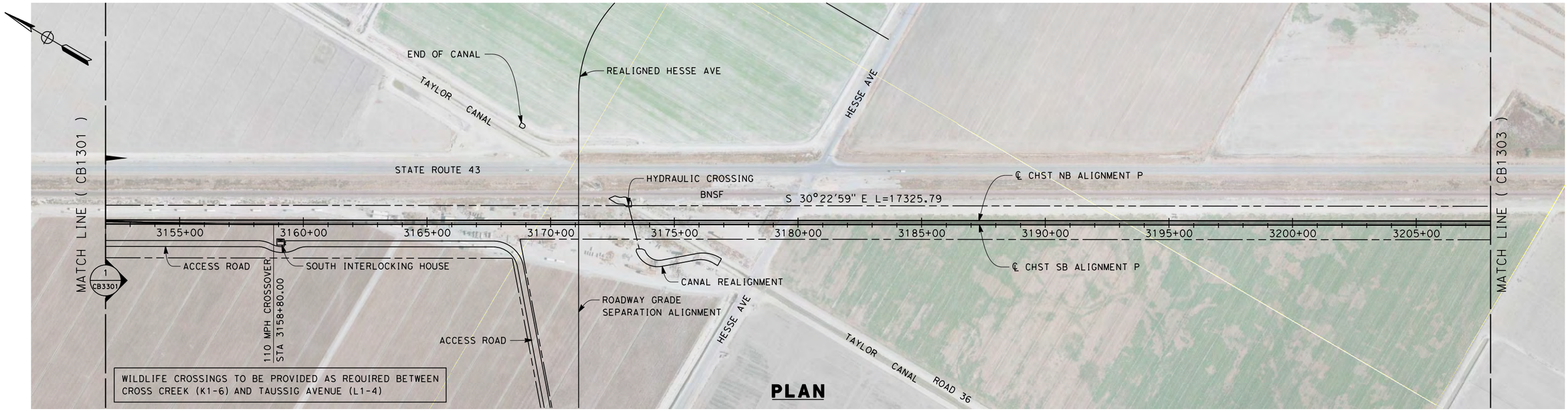
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

PIXLEY SUBSECTION
ALIGNMENT P
STA. 3096+00 TO 3152+00
PLAN AND PROFILE

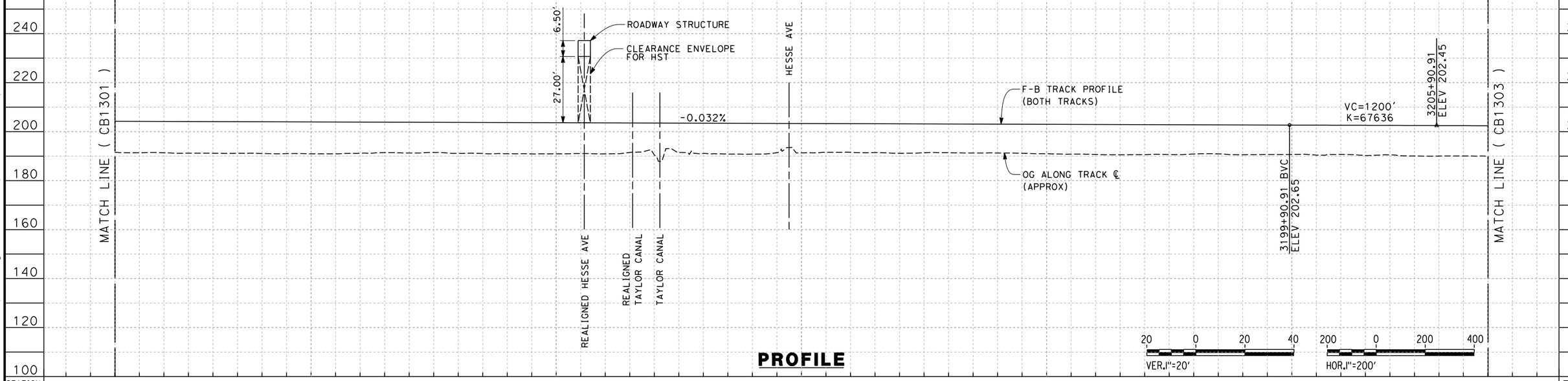
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SHEET NO. 2 OF 9

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

STATION	3152+00	3160+00	3170+00	3180+00	3190+00	3200+00	3208+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

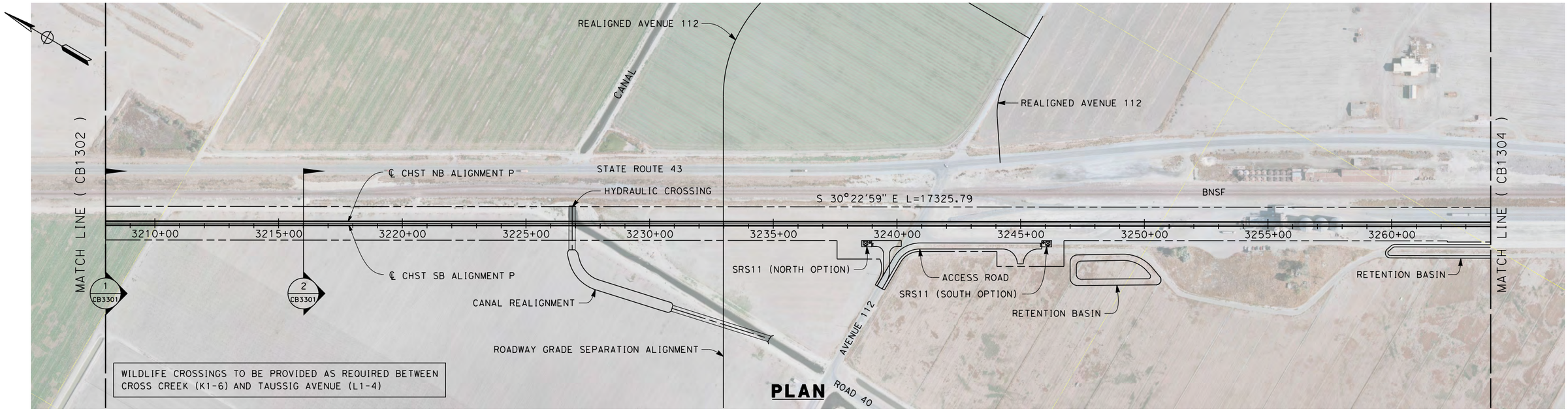
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
STA. 3152+00 TO 3208+00
PLAN AND PROFILE

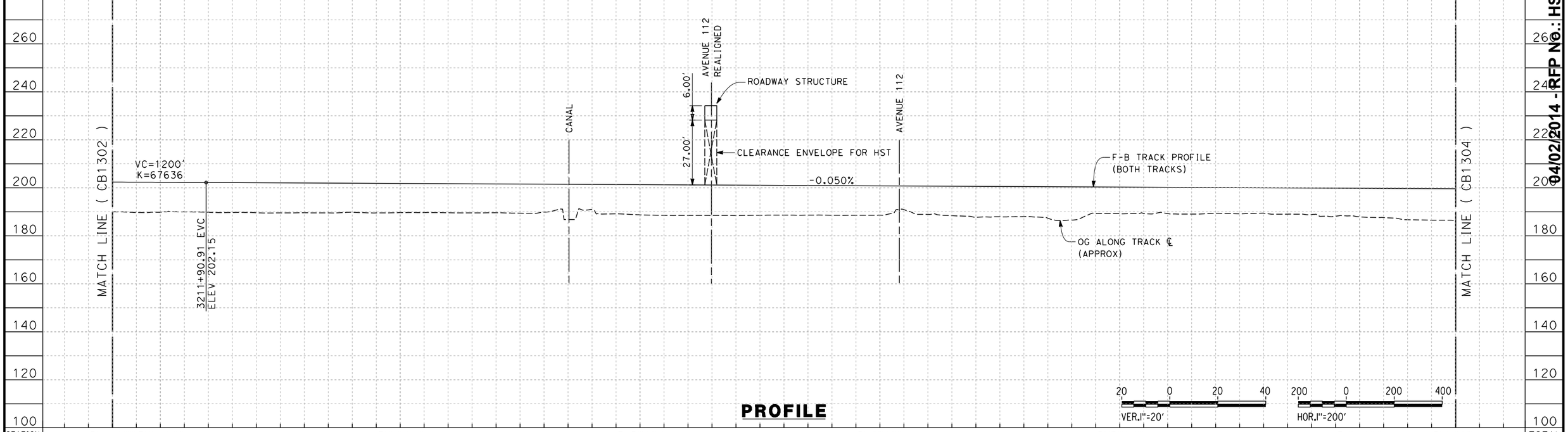
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DRAWING NO. CB1302
SCALE AS SHOWN
SHEET NO. 3 OF 9

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

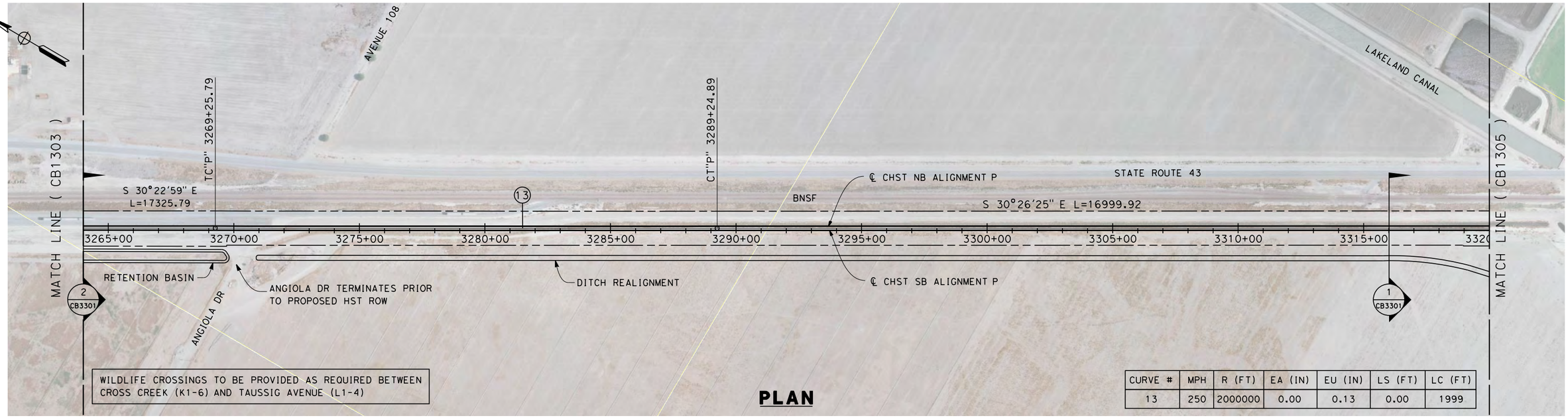
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

PIXLEY SUBSECTION
ALIGNMENT P
STA. 3208+00 TO 3264+00
PLAN AND PROFILE

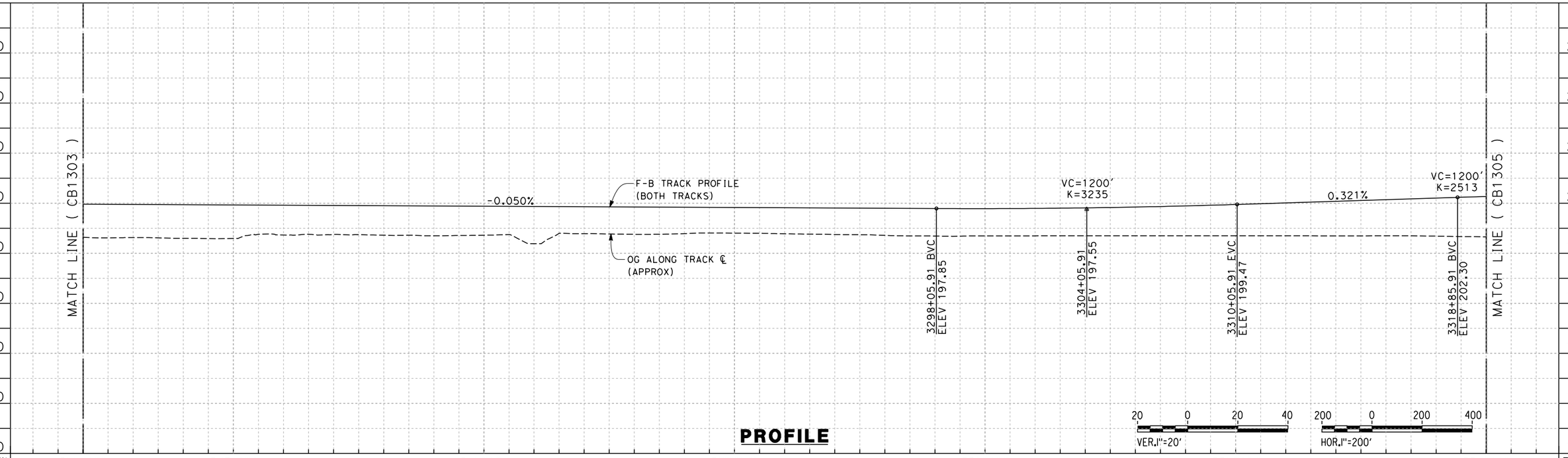
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DRAWING NO. CB1303
SCALE AS SHOWN
SHEET NO. 4 OF 9

04/02/2014 - RFP No.: HSR13-57



PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
13	250	2000000	0.00	0.13	0.00	1999



PROFILE

STATION	3264+00	3270+00	3280+00	3290+00	3300+00	3310+00	3320+00	TOTAL
CY Exc								
CY Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
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CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

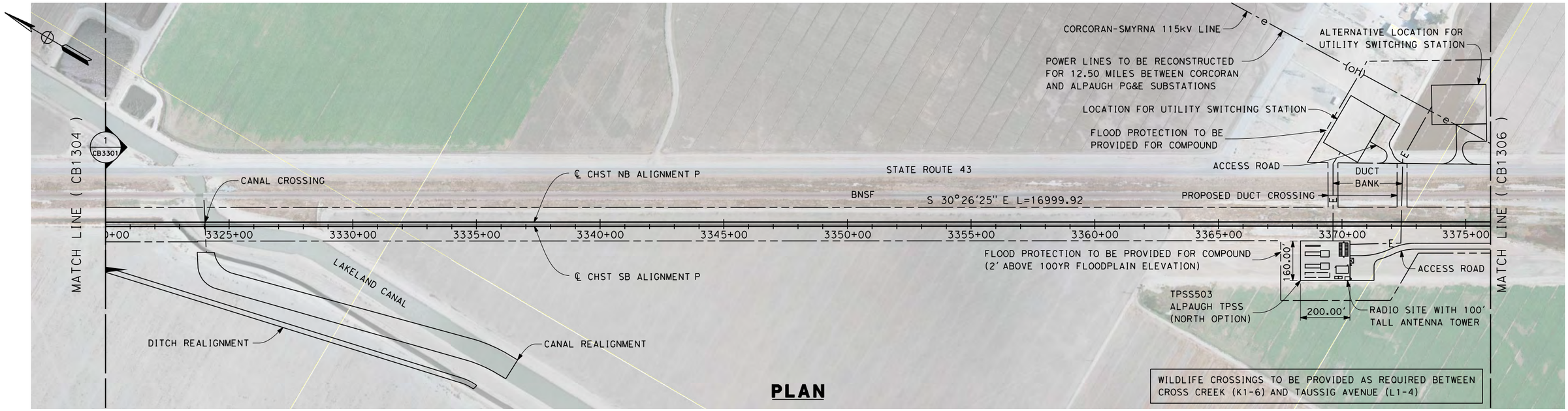
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

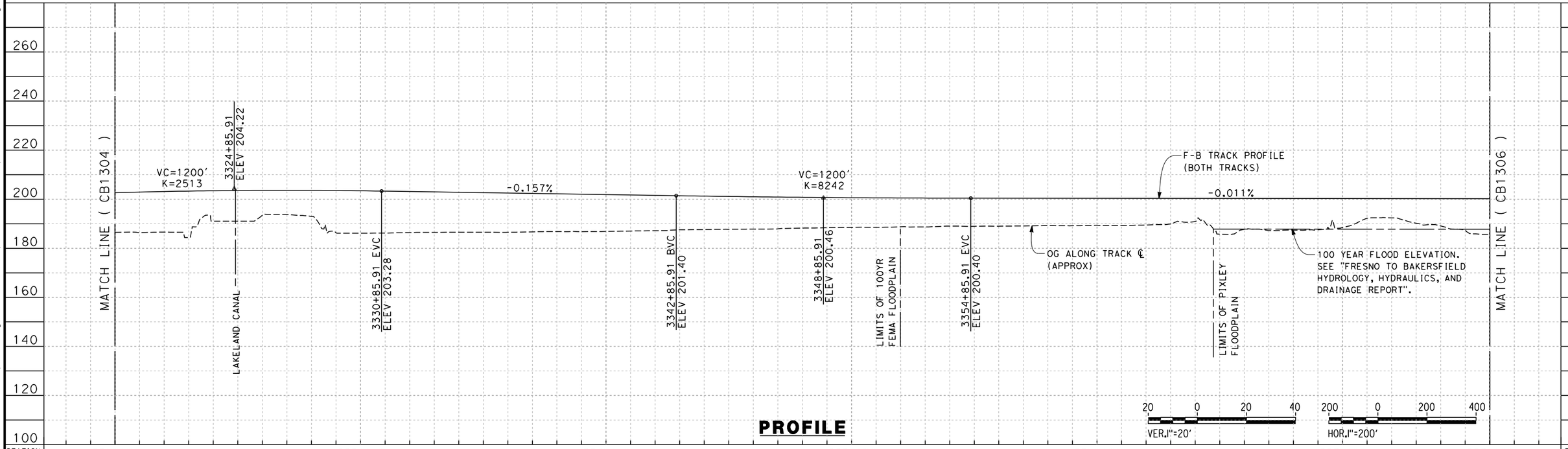
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
STA. 3264+00 TO 3320+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1304
SCALE AS SHOWN
SHEET NO. 5 OF 9

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04/02/2014 - RFP No.: HSR13-57



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

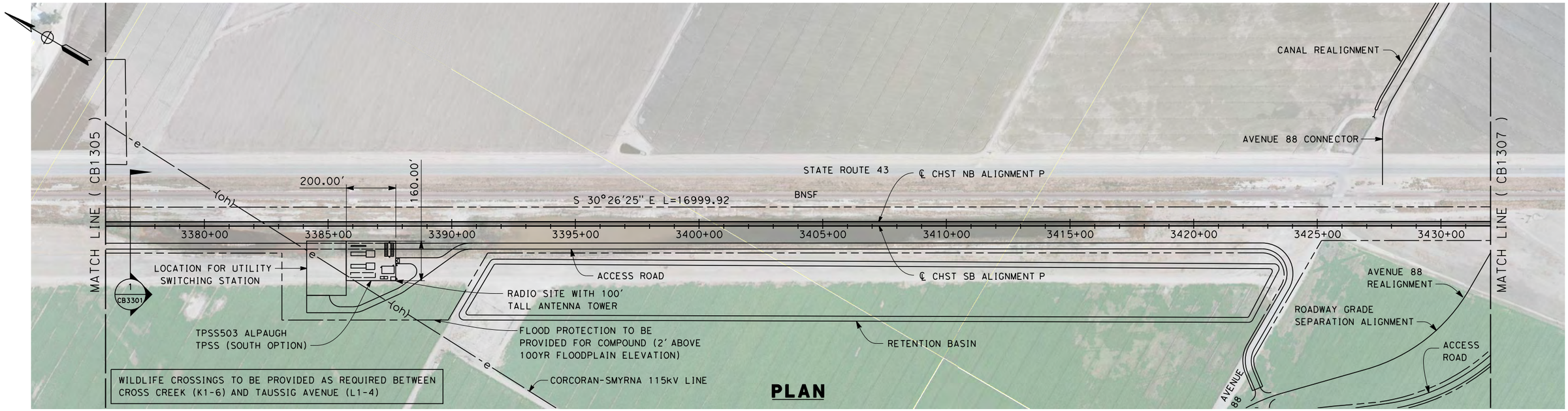
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
STA. 3320+00 TO 3376+00
PLAN AND PROFILE

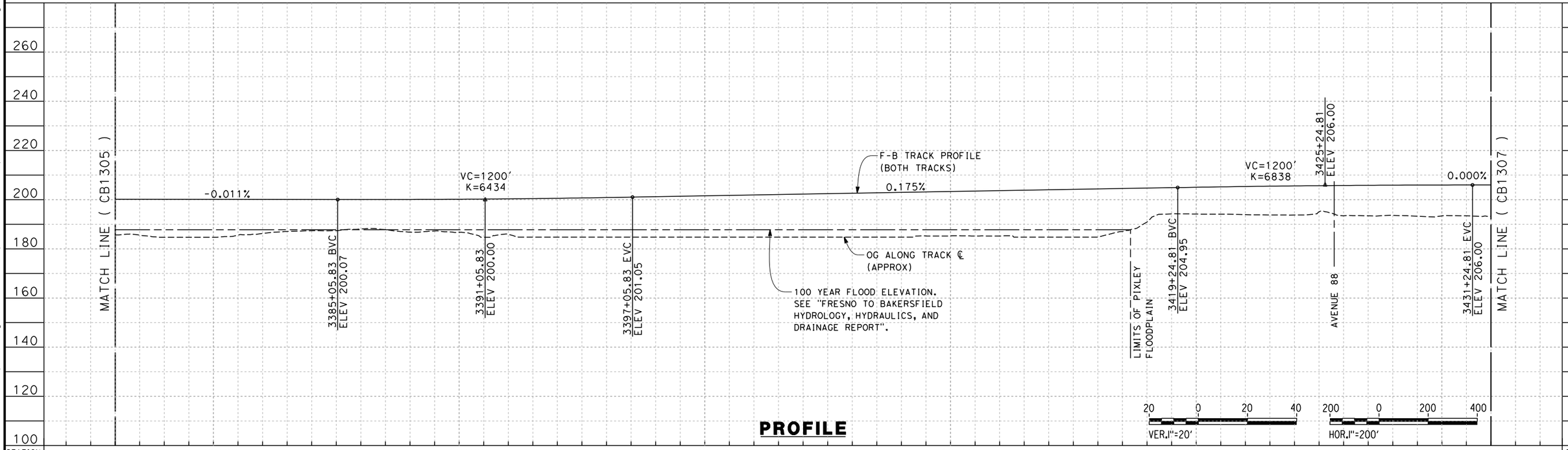
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DRAWING NO. CB1305
SCALE AS SHOWN
SHEET NO. 6 OF 9

RFP No.: HSR13-57
04/02/2014

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

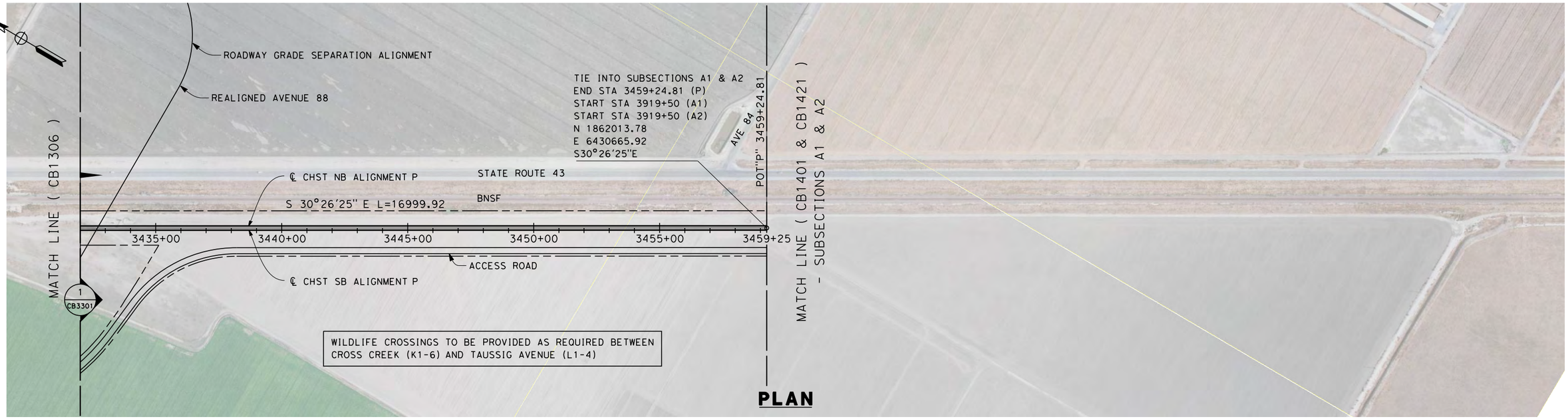
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

PIXLEY SUBSECTION
ALIGNMENT P
STA. 3376+00 TO 3432+00
PLAN AND PROFILE

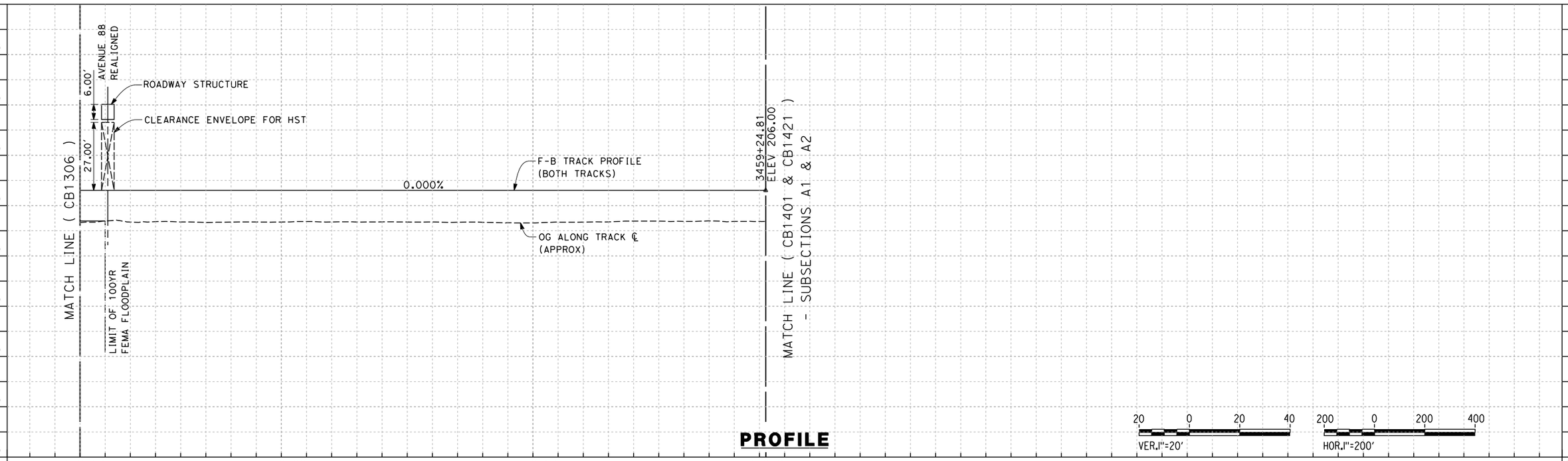
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SHEET NO. 7 OF 9

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

PIXLEY SUBSECTION
ALIGNMENT P
STA. 3432+00 TO 3459+25
PLAN AND PROFILE

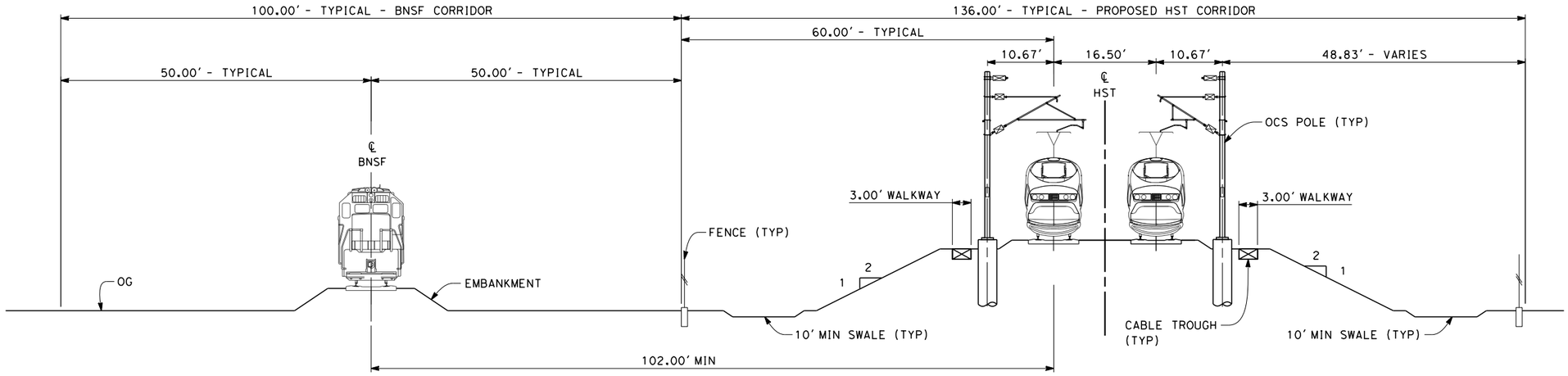
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DRAWING NO. CB1307
SCALE AS SHOWN
SHEET NO. 8 OF 9

04/02/2014 - RFP No.: HSR13-57

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paul.tonkin

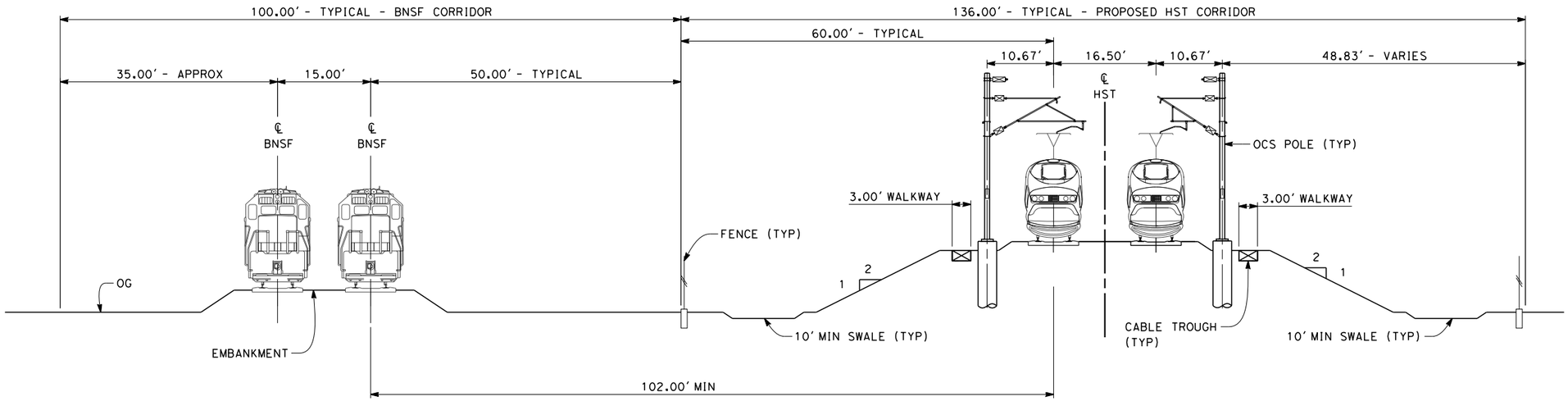
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE.
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS.



SECTION 1

TWIN TRACK - ADJACENT TO SINGLE TRACK BNSF
STA 3096+00 THROUGH STA 3216+00
STA 3316+00 THROUGH STA 3459+25



SECTION 2

TWIN TRACK - ADJACENT TO TWIN TRACK BNSF
STA 3216+00 THROUGH STA 3316+00

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY J. BORGHESI
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
TYPICAL SECTION

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3301
SCALE AS SHOWN
SHEET NO. 9 OF 9

paul.tonkin 12/12/2013 4:02:19 PM c:\pwworking\hmm\external\paul.tonkin01-arup.com\d0123770\FB-CB-3301-P.dgn



LEGEND

EXISTING FREIGHT RAILROAD

PROPOSED CHST

3000 0 3000 6000

1"=3000'

1/27/2014 5:23:36 PM c:\pwworking\hmm\external\paul.tonkin01-arup.com\d0178591\FB-CB-1400-A1.dgn

Paul.Tonkin

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 02/04/14

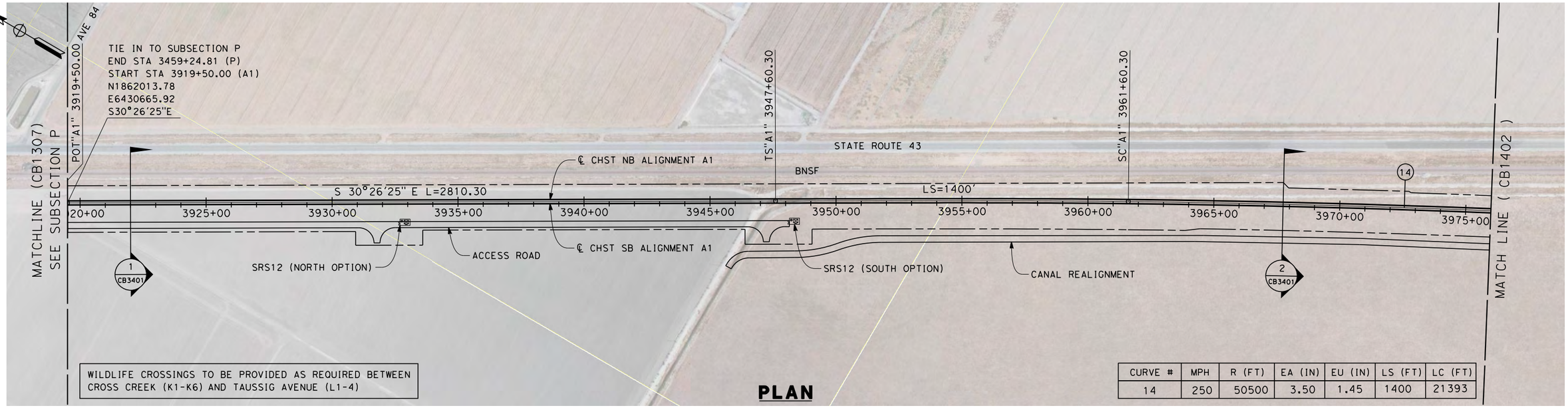
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 3919+50 TO 4925+51
KEY MAP

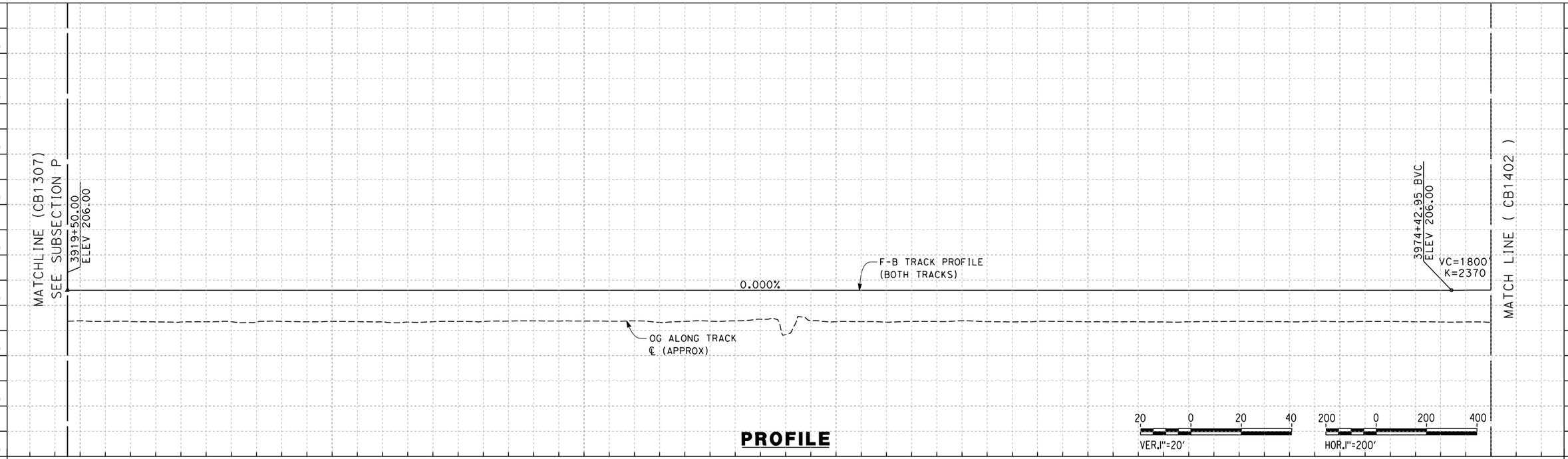
CONTRACT NO. HSR 06-0003
DRAWING NO. CB1400
SCALE AS SHOWN
SHEET NO. 1 OF 21



WILDLIFE CROSSINGS TO BE PROVIDED AS REQUIRED BETWEEN CROSS CREEK (K1-K6) AND TAUSSIG AVENUE (L1-4)

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
14	250	50500	3.50	1.45	1400	21393

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

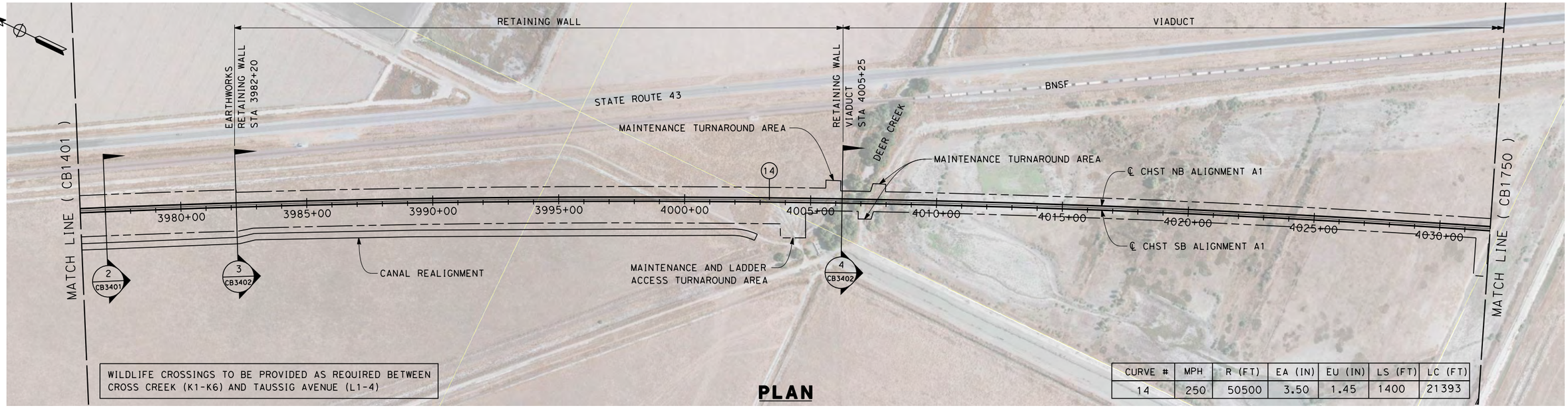
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 3919+50 TO 3976+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1401
SCALE AS SHOWN
SHEET NO. 2 OF 21

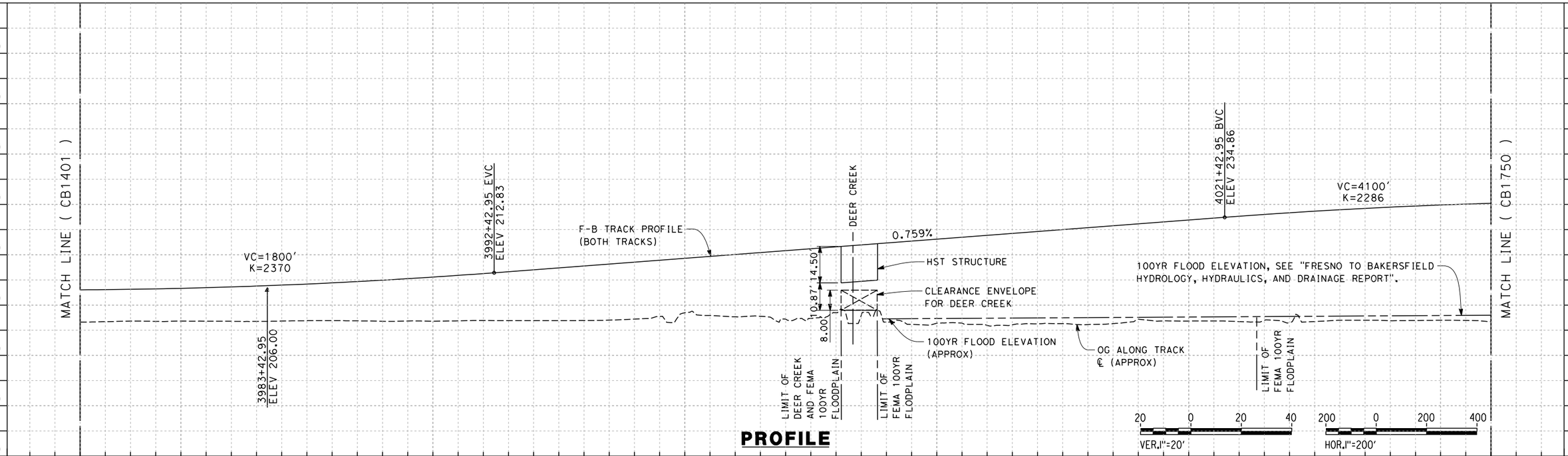
04/02/2014 - RFP No.: HSR13-57

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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
14	250	50500	3.50	1.45	1400	21393



PROFILE

STATION	3976+00	3980+00	3990+00	4000+00	4010+00	4020+00	4030+00	4032+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

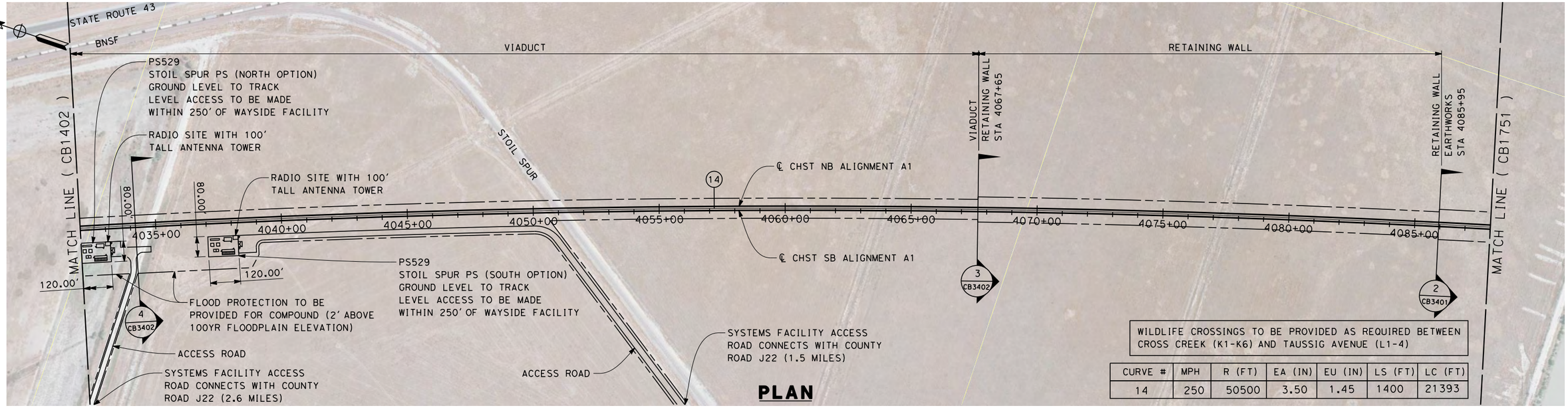
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 3976+00 TO 4032+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1402
SCALE AS SHOWN
SHEET NO. 3 OF 21

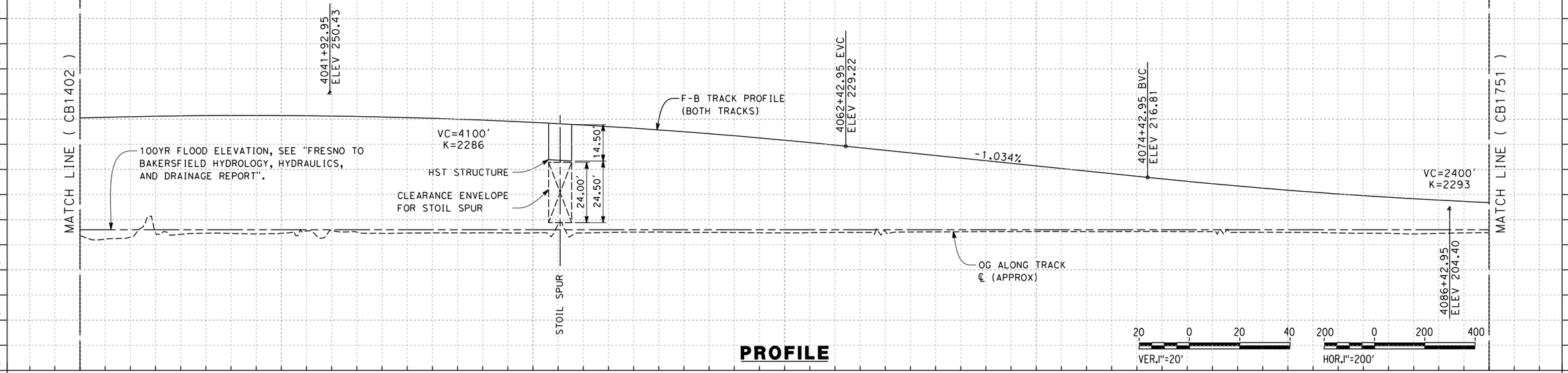
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
14	250	50500	3.50	1.45	1400	21393

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

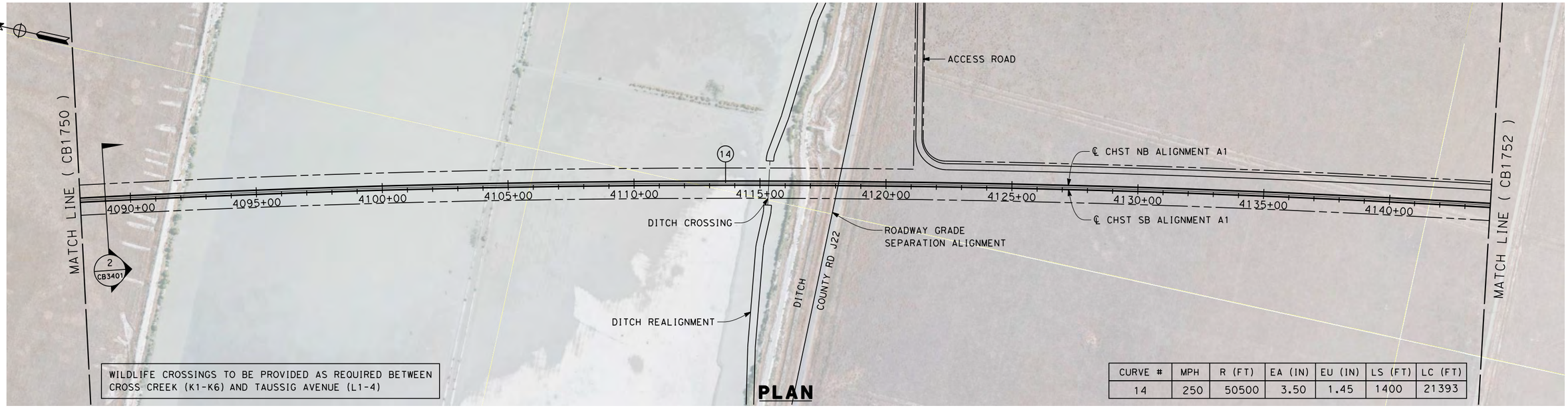
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4032+00 TO 4088+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1750
SCALE AS SHOWN
SHEET NO. 4 OF 21

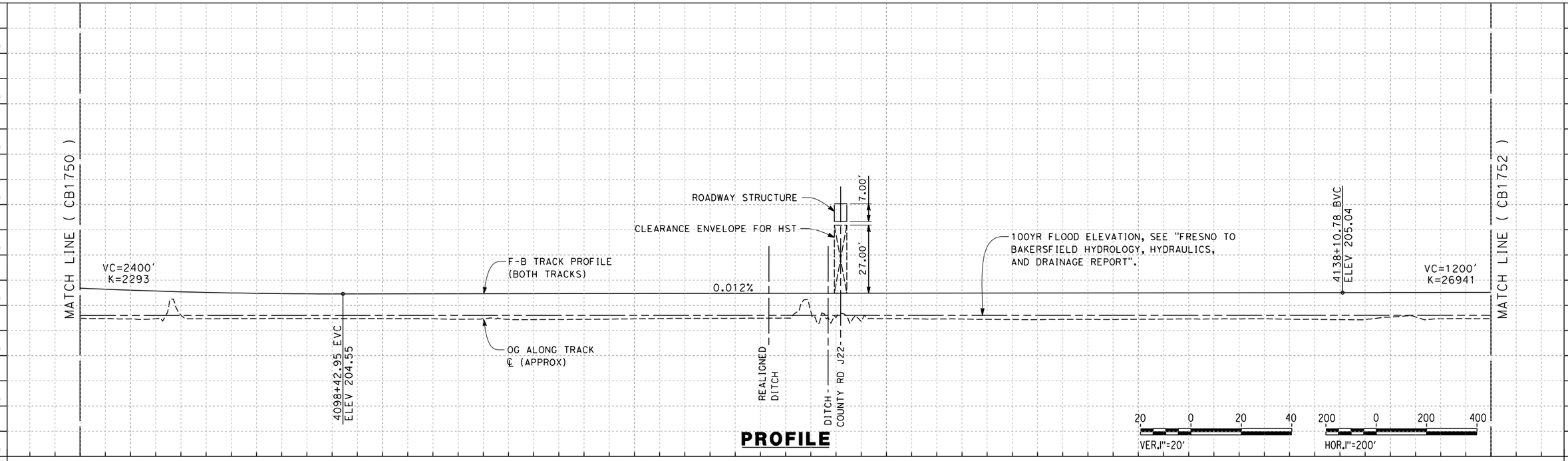
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PLAN

CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
14	250	50500	3.50	1.45	1400	21393



PROFILE

STATION	4088+00	4090+00	4100+00	4110+00	4120+00	4130+00	4140+00	4144+00	TOTAL
CY Exc									
CY Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

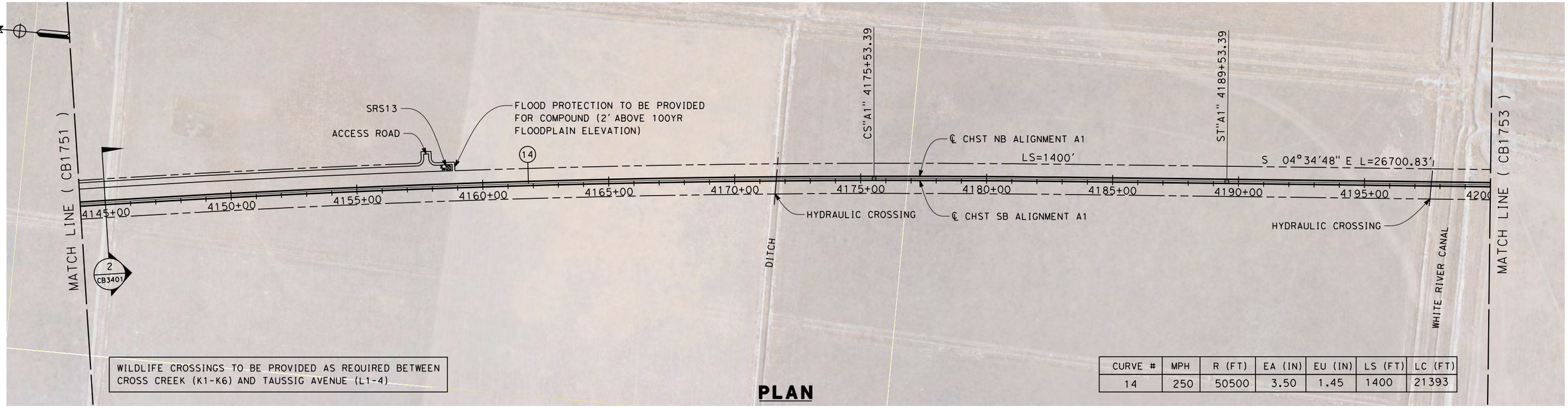
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4088+00 TO 4144+00
PLAN AND PROFILE

CONTRACT NO. HSR 06-0003
DRAWING NO. CB1751
SCALE AS SHOWN
SHEET NO. 5 OF 21

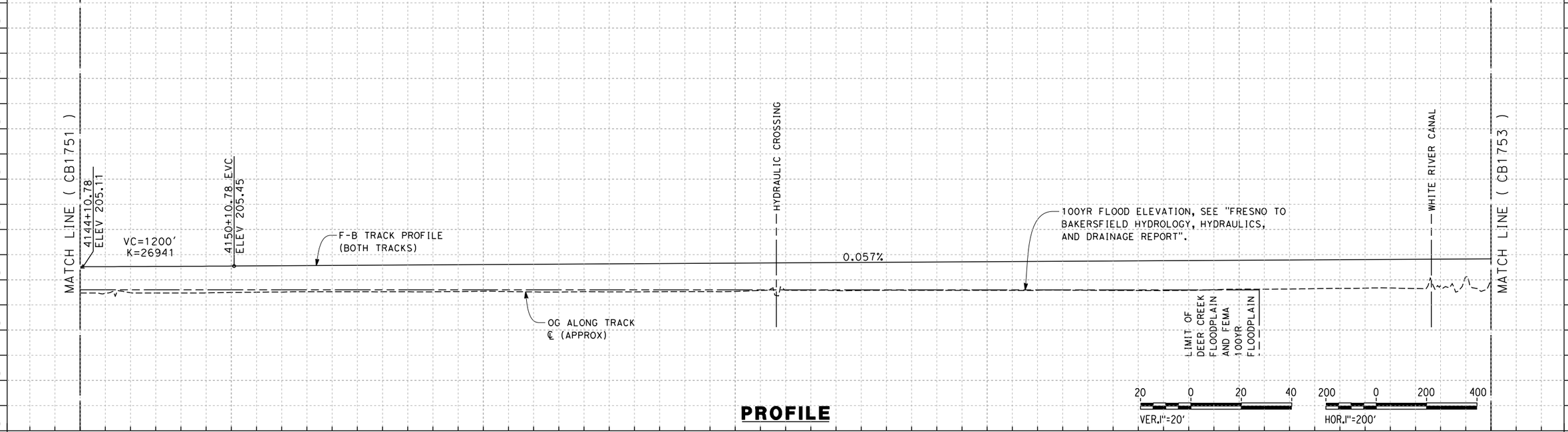
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CURVE #	MPH	R (FT)	EA (IN)	EU (IN)	LS (FT)	LC (FT)
14	250	50500	3.50	1.45	1400	21393

PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

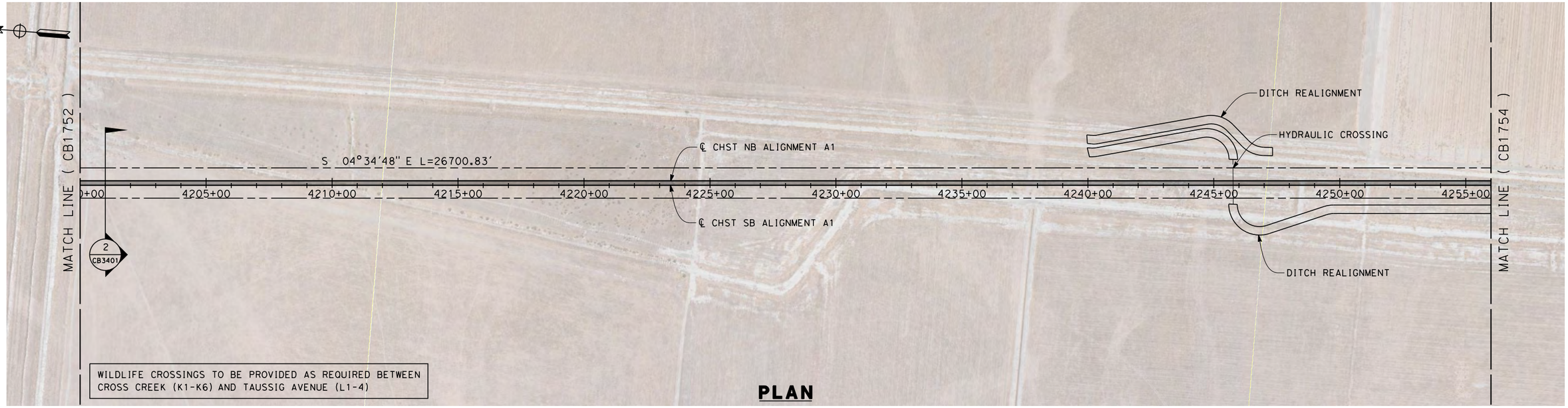
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4144+00 TO 4200+00
PLAN AND PROFILE

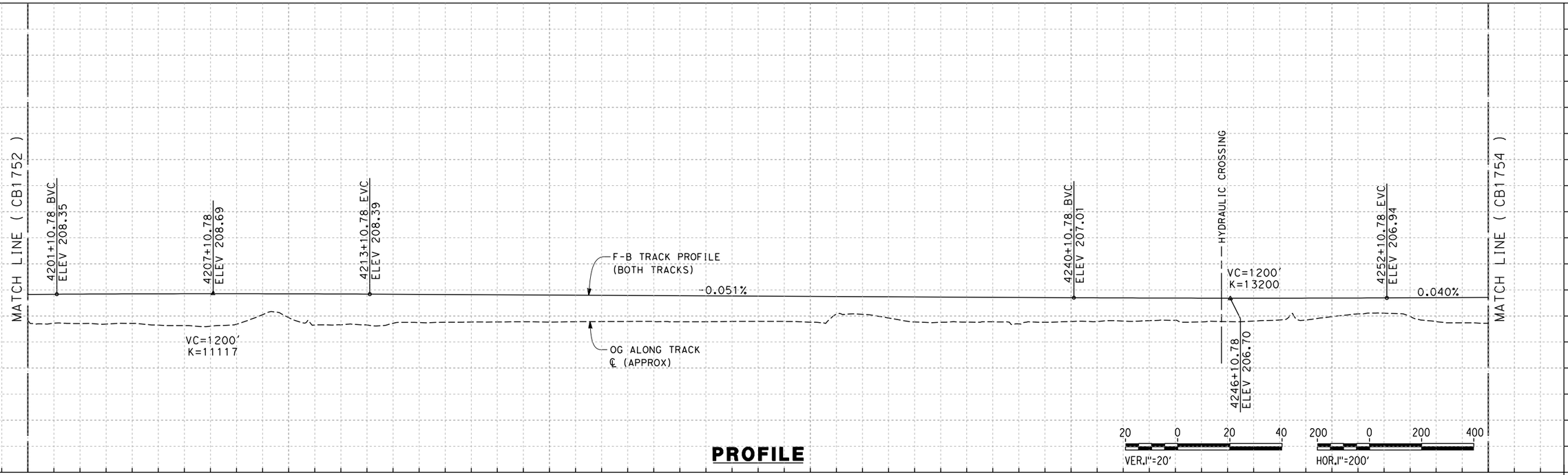
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DRAWING NO. CB1752
SCALE AS SHOWN
SHEET NO. 6 OF 21

04/02/2014 - RFP No.: HSR13-57

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stephen.litsas



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

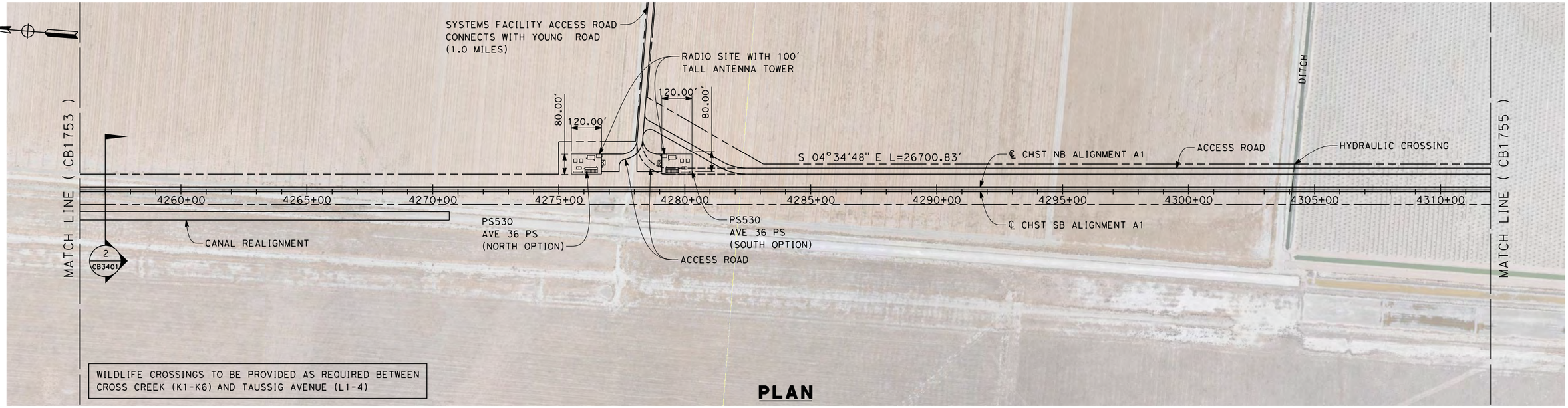
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4200+00 TO 4256+00
PLAN AND PROFILE

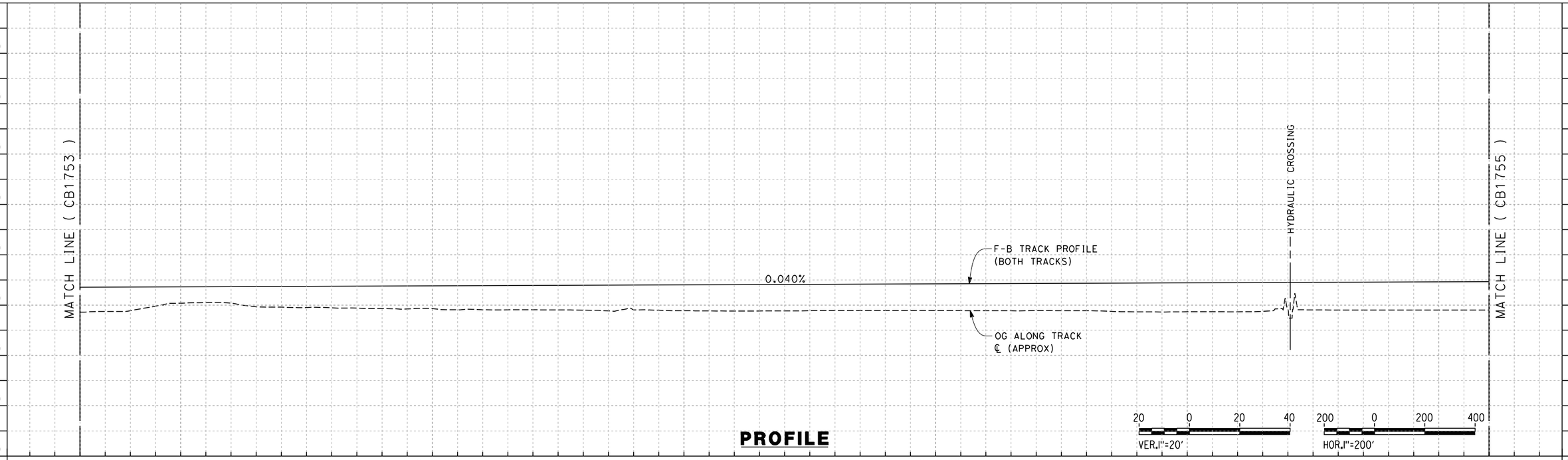
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SHEET NO. 7 OF 21

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

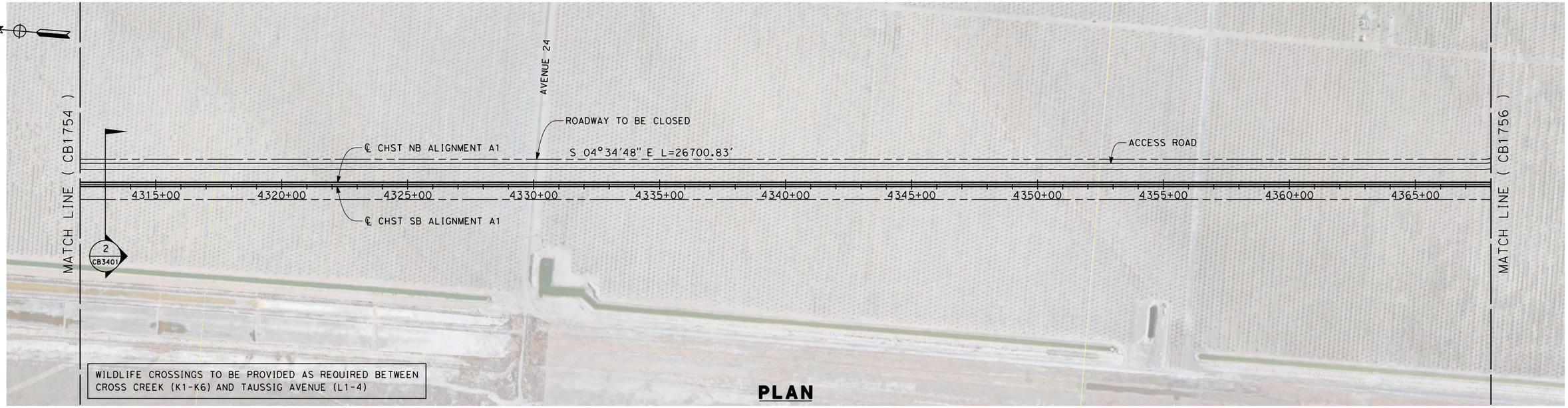
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4256+00 TO 4312+00
PLAN AND PROFILE

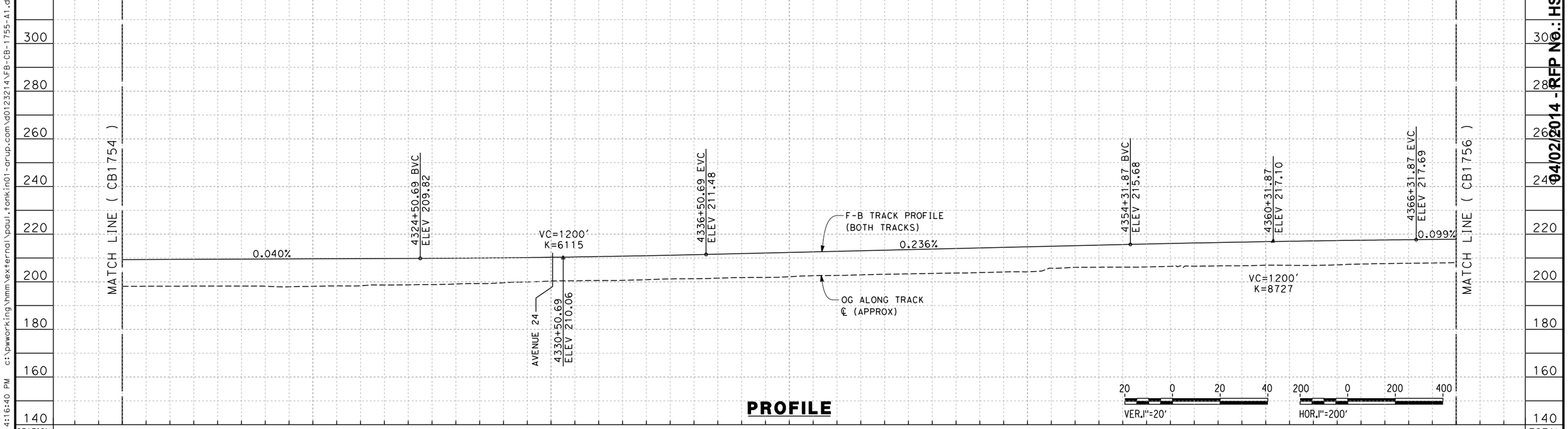
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SHEET NO. 8 OF 21

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

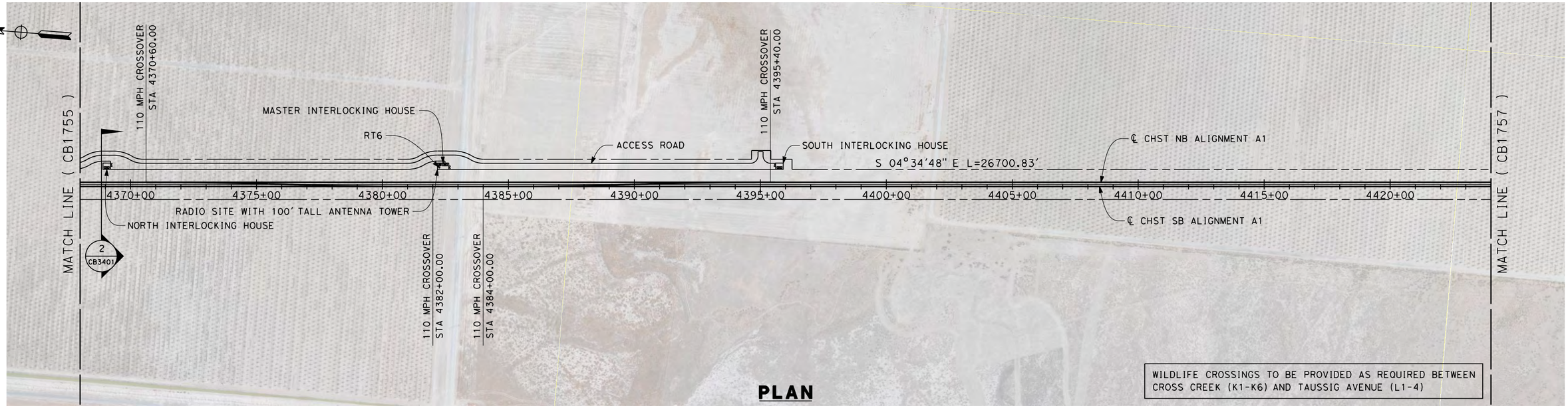
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4312+00 TO 4368+00
PLAN AND PROFILE

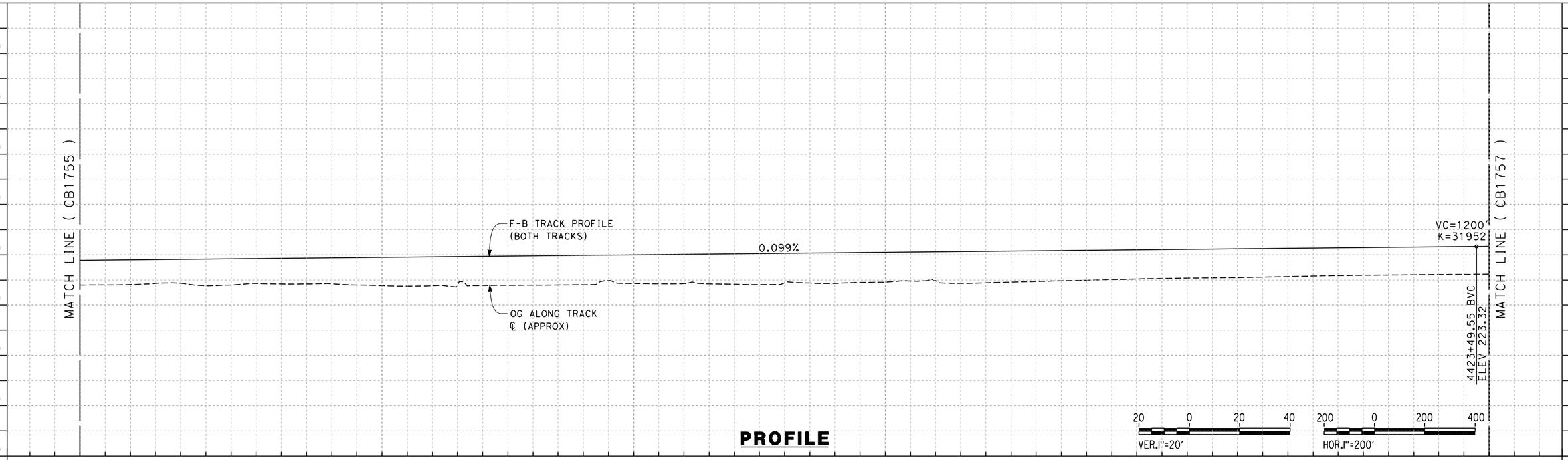
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SHEET NO. 9 OF 21

04/02/2014 - RFP No.: HSR13-57

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PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4368+00 TO 4424+00
PLAN AND PROFILE

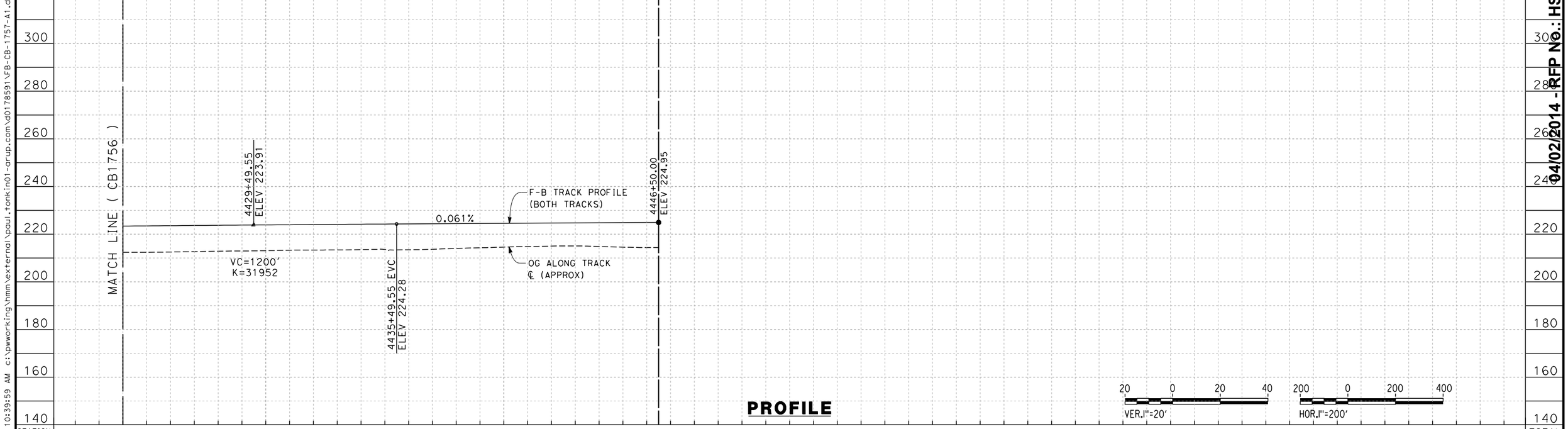
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SHEET NO. 10 OF 21

04/02/2014 - RFP No.: HSR13-57

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stephen.litsas



PLAN



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
STA. 4424+00 TO 4480+00
PLAN AND PROFILE

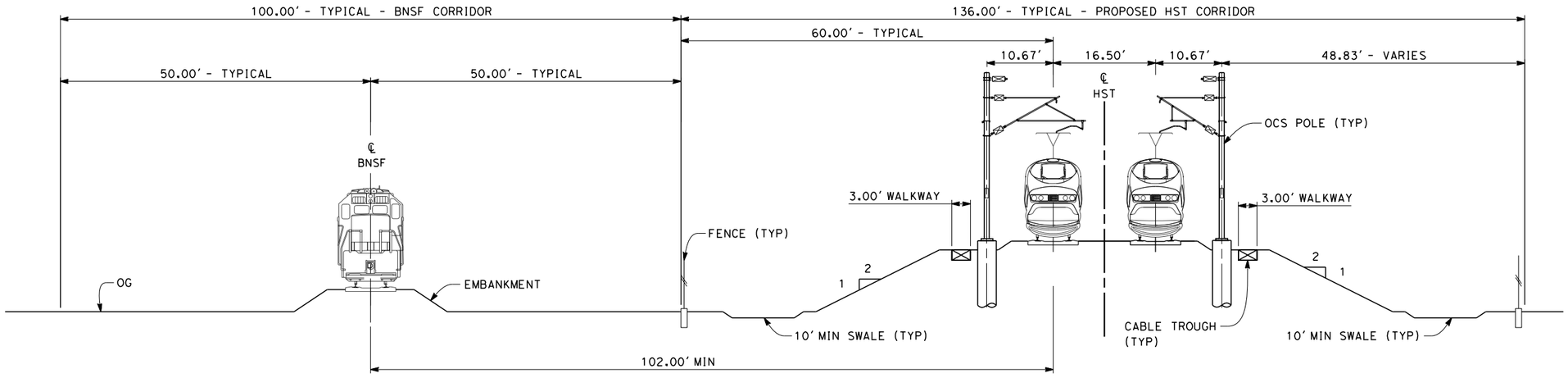
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SHEET NO. 11 OF 21

04/02/2014 - RFP No.: HSR13-57

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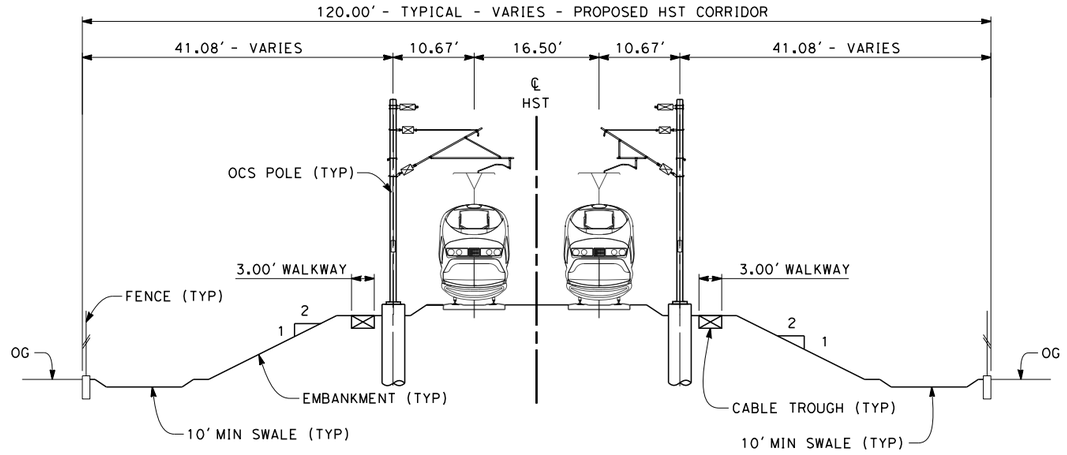
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.



SECTION 1

TWIN TRACK - ADJACENT TO SINGLE TRACK BNSF
STA 3919+50 THROUGH STA 3967+75



SECTION 2

TWIN TRACK - AT-GRADE WITH OPEN DRAINAGE
STA 3967+75 THROUGH STA 3982+20
STA 4085+95 THROUGH STA 4925+51.33

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
TYPICAL SECTIONS

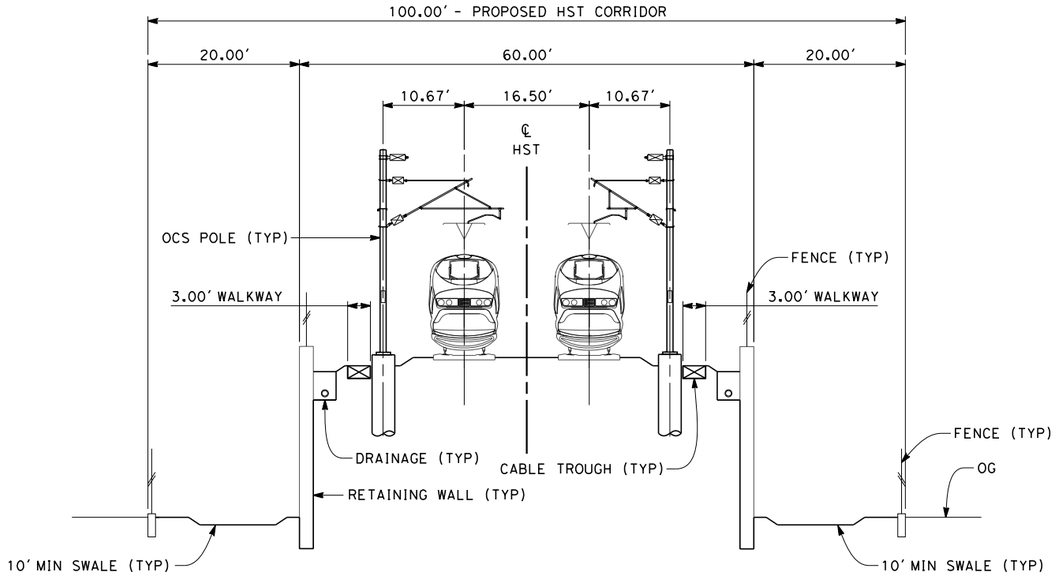
CONTRACT NO. HSR 06-0003
DRAWING NO. CB3401
SCALE AS SHOWN
SHEET NO. 20 OF 21

04/02/2014 - RFP No.: HSR13-57

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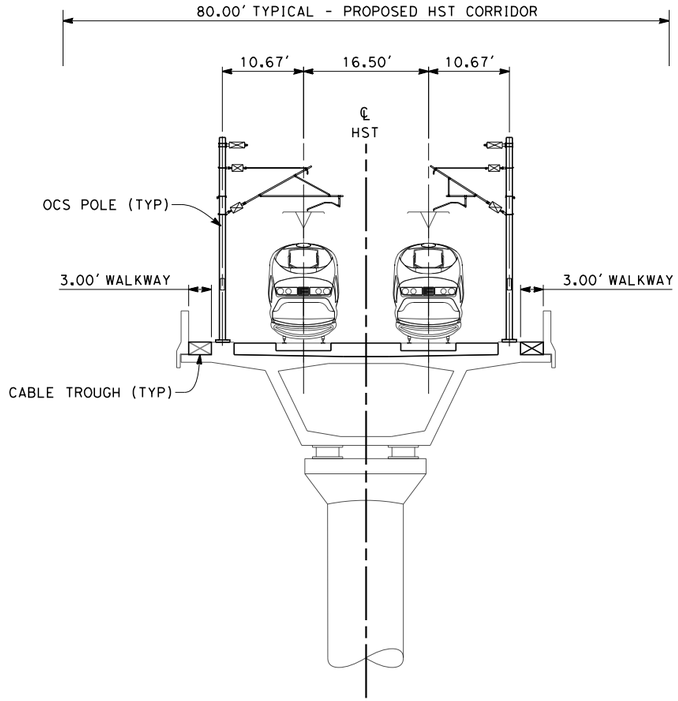
NOTES:

1. TRACKFORM SHOWN IS INDICATIVE
2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.



SECTION 3

TWIN TRACK - RETAINED EMBANKMENT
STA 3982+20 THROUGH STA 4005+25
STA 4067+65 THROUGH STA 4085+95



SECTION 4

TWIN TRACK - AERIAL VIADUCT
STA 4005+25 THROUGH STA 4067+65

10 0 10 20
1"=10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S. LITSAS
DRAWN BY E. TANAKA
CHECKED BY G. WALKER
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CB3402
SCALE AS SHOWN
SHEET NO. 21 OF 21

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CALIFORNIA HIGH-SPEED TRAIN

HST Structure Plans



RECORD SET 15% DESIGN SUBMISSION

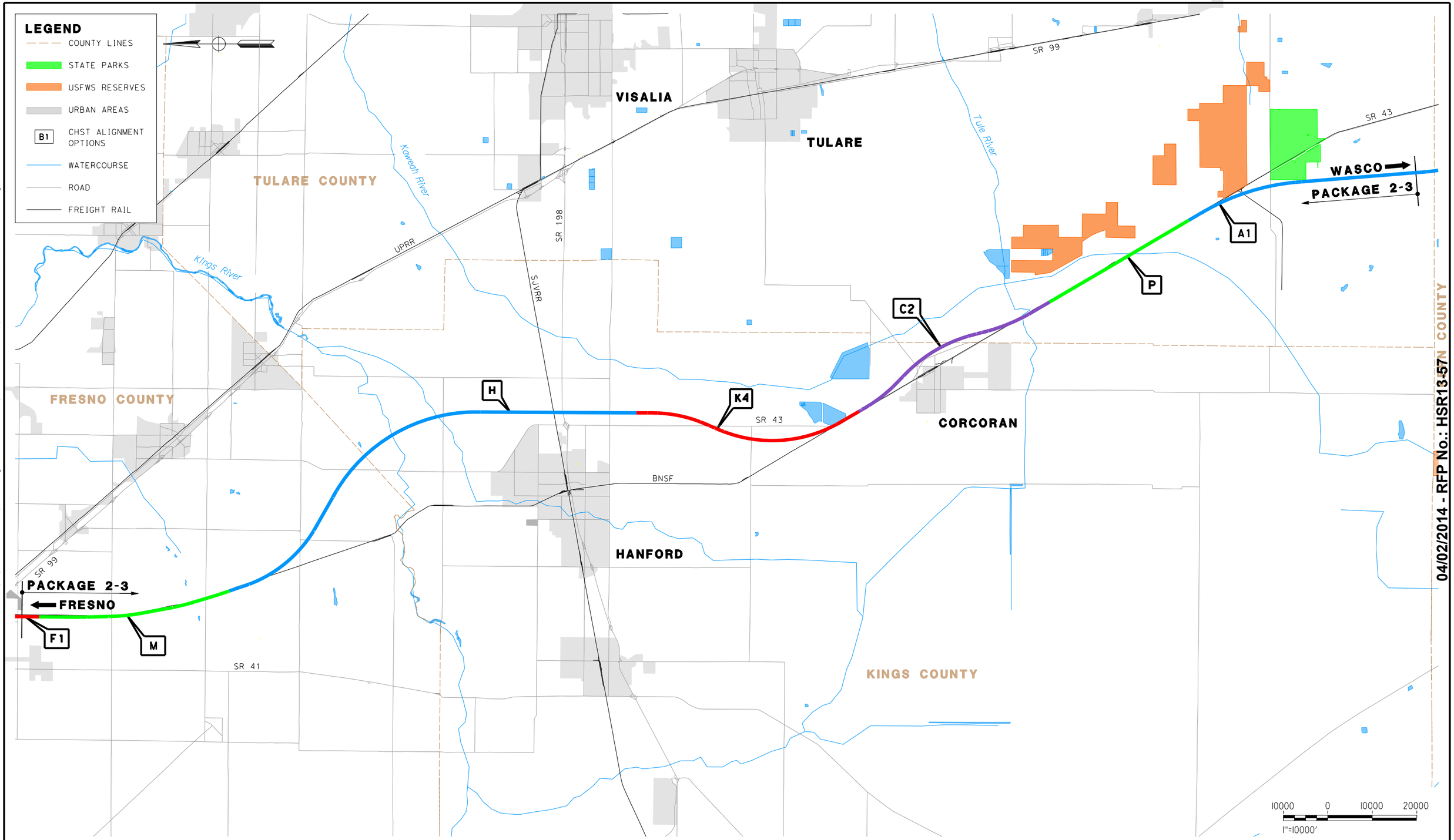
Fresno to Bakersfield

Plans and Elevations and Typical Sections

December 2013

CALIFORNIA High-Speed Rail Authority

04/02/2014 - RFP No.: HSR13-57



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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PACKAGE 2-3
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. TT-B0001
SCALE AS SHOWN
SHEET NO. 1 OF 5

GENERAL SHEETS

DRAWING No	DRAWING DESCRIPTION	SHEET No
TT-B0001	ALIGNMENT - LOCATION MAP	1 OF 5
GE-A0024	HST STRUCTURES - INDEX OF SHEETS (SHEET 1 OF 2)	2 OF 5
GE-A0025	HST STRUCTURES - INDEX OF SHEETS (SHEET 2 OF 2)	3 OF 5
CB0010	GENERAL - ABBREVIATIONS AND LEGENDS - SHEET 1 OF 2	4 OF 5
CB0011	GENERAL - ABBREVIATIONS AND LEGENDS - SHEET 2 OF 2	5 OF 5

ALIGNMENT H - CONEJO VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2220	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - KEY MAP	1 OF 8
SV2221	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	2 OF 8
SV2222	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	3 OF 8
SV2223	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	4 OF 8
SV2224	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	5 OF 8
SV2225	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	6 OF 8
SV2226	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - PLAN AND ELEVATION	7 OF 8
SV2227	HANFORD SUBSECTION - ALIGNMENT H - CONEJO VIADUCT - TYPICAL SECTIONS	8 OF 8

ALIGNMENT H - KINGS RIVER VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2258	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - KEY MAP	1 OF 18
SV2259	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	2 OF 18
SV2260	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	3 OF 18
SV2261	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	4 OF 18
SV2262	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	5 OF 18
SV2263	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	6 OF 18
SV2264	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	7 OF 18
SV2265	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	8 OF 18
SV2266	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	9 OF 18
SV2267	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	10 OF 18
SV2268	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	11 OF 18
SV2269	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	12 OF 18
SV2270	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	13 OF 18
SV2271	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	14 OF 18
SV2272	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	15 OF 18
SV2273	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - PLAN AND ELEVATION	16 OF 18
SV2274	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - TYPICAL SECTIONS	17 OF 18
SV2275	HANFORD SUBSECTION - ALIGNMENT H - KINGS RIVER VIADUCT - TYPICAL SECTIONS	18 OF 18

ALIGNMENT H - HANFORD VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2300	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - KEY MAP	1 OF 14
SV2301	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	2 OF 14
SV2302	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	3 OF 14
SV2303	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	4 OF 14
SV2304	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	5 OF 14
SV2305	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	6 OF 14
SV2306	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	7 OF 14
SV2307	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	8 OF 14
SV2308	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	9 OF 14
SV2309	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	10 OF 14
SV2310	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	11 OF 14
SV2311	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - PLAN AND ELEVATION	12 OF 14
SV2312	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - TYPICAL SECTIONS	13 OF 14
SV2313	HANFORD SUBSECTION - ALIGNMENT H - HANFORD VIADUCT - TYPICAL SECTIONS	14 OF 14

ALIGNMENT K4 - STATE ROUTE 43 UNDERPASS

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2450	KAWEAH SUBSECTION - ALIGNMENT K4 - STATE ROUTE 43 UNDERPASS - KEY MAP	1 OF 3
SV2451	KAWEAH SUBSECTION - ALIGNMENT K4 - STATE ROUTE 43 UNDERPASS - PLAN AND ELEVATION	2 OF 3
SV2452	KAWEAH SUBSECTION - ALIGNMENT K4 - STATE ROUTE 43 UNDERPASS - TYPICAL SECTIONS	3 OF 3

ALIGNMENT K4 - CROSS CREEK VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2460	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - KEY MAP	1 OF 13
SV2461	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	2 OF 13
SV2462	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	3 OF 13
SV2463	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	4 OF 13
SV2465	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	6 OF 13
SV2466	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	7 OF 13
SV2467	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	8 OF 13
SV2468	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	9 OF 13
SV2469	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	10 OF 13
SV2470	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	11 OF 13
SV2471	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - PLAN AND ELEVATION	12 OF 13
SV2472	KAWEAH SUBSECTION - ALIGNMENT K4 - CROSS CREEK VIADUCT - TYPICAL SECTIONS	13 OF 13

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SHEET NO. 2 OF 5

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ALIGNMENT C2 - WHITLEY AVE UNDERPASS

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2445	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - WHITLEY AVENUE/SR137 UNDERPASS - KEY MAP	1 OF 2
SV2446	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - WHITLEY AVENUE/SR137 UNDERPASS - PLAN AND ELEVATION	2 OF 2

ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV2490	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - KEY MAP	1 OF 11
SV2491	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	2 OF 11
SV2492	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	3 OF 11
SV2493	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	4 OF 11
SV2494	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	5 OF 11
SV2495	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	6 OF 11
SV2496	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	7 OF 11
SV2497	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - PLAN AND ELEVATION	8 OF 11
SV2499	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - TYPICAL SECTIONS	9 OF 11
SV2500	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - TYPICAL SECTIONS	10 OF 11
SV2501	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - STATE ROUTE 43 BNSF VIADUCT - TYPICAL SECTIONS	11 OF 11

ALIGNMENT A1 - DEER CREEK VIADUCT

DRAWING No	DRAWING DESCRIPTION	SHEET No
SV1500	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - KEY MAP	1 OF 9
SV1501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	2 OF 9
SV1502	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	3 OF 9
SV1503	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	4 OF 9
SV1504	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	5 OF 9
SV1505	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	6 OF 9
SV1506	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	7 OF 9
SV1507	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - PLAN AND ELEVATION	8 OF 9
SV1508	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - DEER CREEK VIADUCT - TYPICAL SECTIONS	9 OF 9

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SCALE NO SCALE
SHEET NO. 3 OF 5

A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BNSF	BURLINGTON NORTH & SANTA FE
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CLEARANCE POINT
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD
CULV	CULVERT
℄	CENTERLINE

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXWY	EXPRESSWAY
EXT	EXTERIOR

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY
FPLM	FULL SPAN PRECAST LAUNCHING METHOD

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HR	HOUR
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HS	HIGH STRENGTH
HST	HIGH SPEED TRAIN
HSR	HIGH SPEED RAIL
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LCB	LEAN CONCRETE BASE
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LC	LENGTH OF CURVE
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL
MSS	MOVING SCAFFOLDING SYSTEM

N

N	NORTH, NORTHING
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
N/A	NOT APPLICABLE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
℄,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

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P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
R/W, ROW	RIGHT OF WAY
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
S	STATION LINE
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES
SJVR	SAN JOAQUIN VALLEY RAILROAD

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TM	TECHNICAL MEMORANDUM
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
TS	TRAFFIC SIGNAL, TUBULAR STEEL, TANGET TO SPIRAL
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

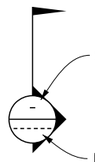
X

X SEC	CROSS SECTION
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

LEGEND



-E- PROPOSED ELECTRICITY LINE

-e- EXISTING ELECTRICITY LINE

-E-(OH)- EXISTING OVERHEAD ELECTRICITY LINE

-E-(OH)- PROPOSED OVERHEAD ELECTRICTY LINE

PROPOSED HST RIGHT OF WAY

PROPOSED HST TRACK CENTERLINE

RETAINING WALL

TOE OF SLOPE / TOP OF CUT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

OR TRACK (PLAN AND ELEVATION)

REL TRACK TO BE REMOVED AND RELOCATED PER BNSF

REMOVE BASE & SURFACING

SOUND BARRIER (POTENTIAL)

DIRECTION OF FLOW

WATER SURFACE

GENERAL NOTES

1. TRACK PROFILE IS DESIGNED AS TOP OF THE LOW RAIL. VERTICAL CLEARANCE REQUIREMENTS ARE MEASURED FROM THE TOP OF THE HIGH RAIL ON SUPERELEVATED TRACK. THE CLEARANCE ENVELOPES SHOWN DEMONSTRATE THE MINIMUM CLEARANCE REQUIREMENTS.

2. MINIMUM VERTICAL CLEARANCE REQUIREMENTS TO CANALS AND DITCHES ARE NOT KNOWN. FURTHER CONSULTATION WITH THE WATERCOURSE OWNERS WILL BE REQUIRED TO DETERMINE NECESSARY CLEARANCES.

3. THE FOLLOWING ARE ROADWAY DESIGN STANDARDS AND GUIDELINES:
   A. CALTRANS HIGHWAY DESIGN MANUAL (2012)
   B. AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011)
   C. AASHTO ROADSIDE DESIGN GUIDE (2011)
   D. APPLICABLE LOCAL DESIGN STANDARD AND GUIDELINES (I.E., CITY OF FRESNO)

4. THE FEMA FLOODPLAIN BOUNDARIES ARE CALLED OUT AS "LIMIT OF 100YR FEMA FLOODPLAIN". THE LIMITS OF THE MODELED 100 YEAR WATER SURFACE ELEVATIONS (WSE) ARE APPROXIMATE AND ARE MARKED WITH THE NAME OF THE WATERBODY ASSOCIATED WITH THE MODELED FLOODING, E.G. "LIMIT OF POSO CREEK FLOODPLAIN".

5. THE STRUCTURE DESIGN ASSUMES THAT THE DEPTH FROM TOR TO TOP OF DECK IS 2'-6" THROUGHOUT. HOWEVER, WHERE BALLASTED TRACK FORM IS USED, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-9" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE, AND PROTECTION LAYER IF REQUIRED. FOR SLAB TRACKFORM, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-6" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE AND PROTECTION LAYER IF REQUIRED.

6. WHERE THE VERTICAL ALIGNMENT GRADE IS LESS THAN 0.5% THE UPPER SURFACE OF THE VIADUCT STRUCTURE SHALL BE PROFILED TO GIVE A MINIMUM LONGITUDINAL FALL OF 0.5%. TYPICALLY FOR A SPAN OF 120'-00" ON A 0% GRADE SECTION OF VIADUCT THIS COULD BE ACHIEVED BY MODIFYING THE CROSS SLOPE OF THE GIRDER LINEARLY BETWEEN 0.8% AT MID-SPAN TO 2% AT EACH END.

7. WHEN LATERAL SEPARATION BETWEEN THE CONVENTIONAL RAILROAD AND HST SYSTEM IS LESS THAN 102', A SITE SPECIFIC HAZARD ANALYSIS WILL BE CONDUCTED TO DETERMINE WHAT SPECIFIC COLLISION PROTECTION MEASURES MAY NEED TO BE IMPLEMENTED.

8. RIP-RAP PROTECTION IS REQUIRED FOR EMBANKMENTS WITHIN FEMA SPECIAL FLOOD HAZARD ZONES, IN ACCORDANCE WITH DESIGN CRITERIA.

9. HST ALIGNMENT CONTROL LINE IS DESIGNED AS THE CENTERLINE BETWEEN THE TWO MAINLINE TRACKS.

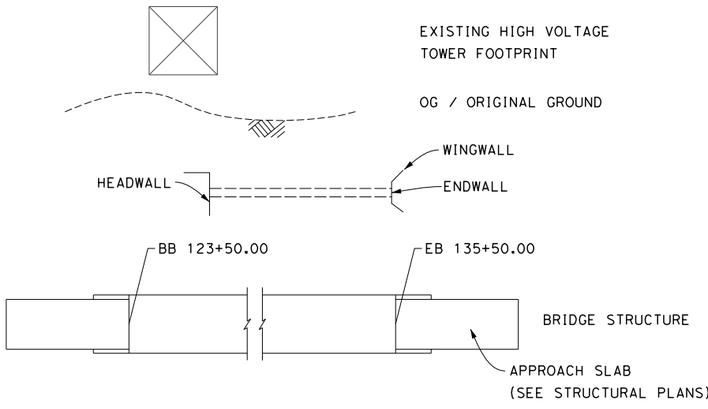
10. TRACK FORM USED IN TYPICAL SECTIONS IS INDICATIVE.

DIRECTION OF TRAFFIC

POINT OF MINIMUM VERTICAL CLEARANCE
ROAD CLOSURE (ROADWAYS)

1 LINE DATA

1 3 CURVE DATA (ALIGNMENTS)
CURVE DATA (STRUCTURES)



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0011
SCALE NO SCALE
SHEET NO. 5 OF 5

Paul.Tonkin 1/27/2014 6:18:39 PM c:\pwworking\hmm\external\paul.tonkin01-arup.com\d0178203\FB-CB-0011.dgn



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY N. HUTTON
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

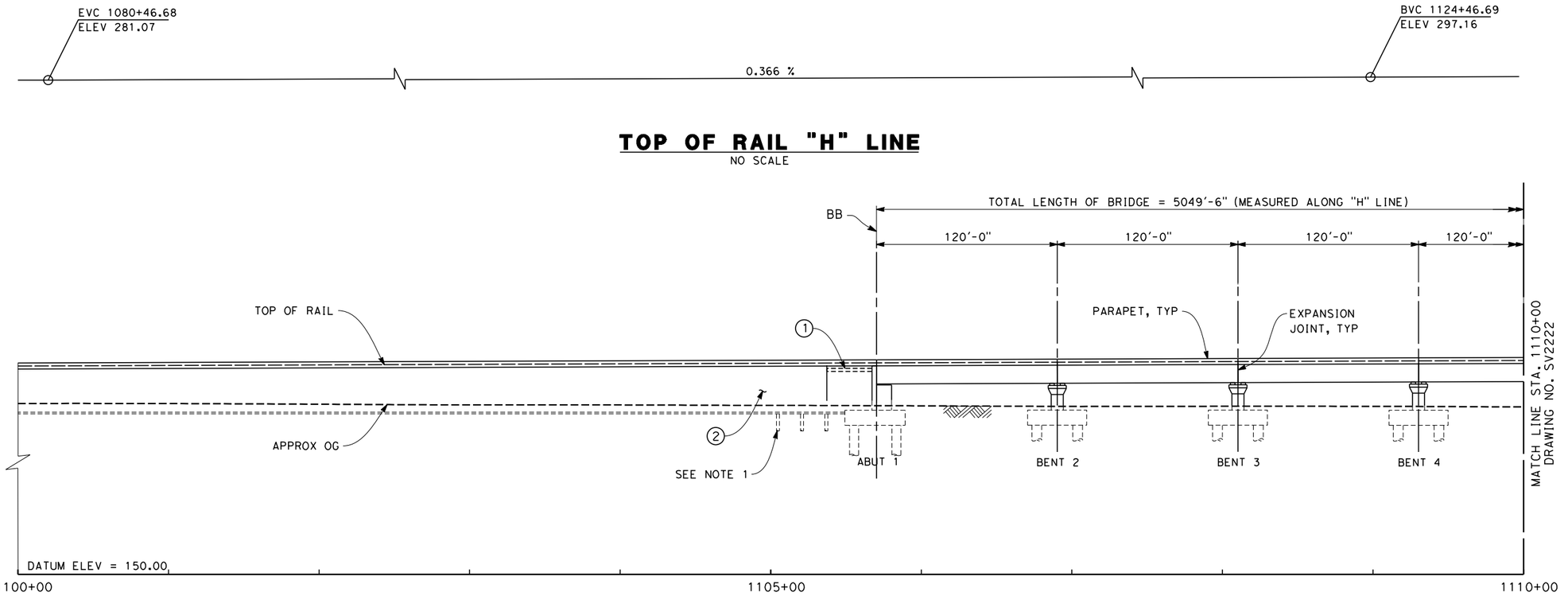
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
KEY MAP

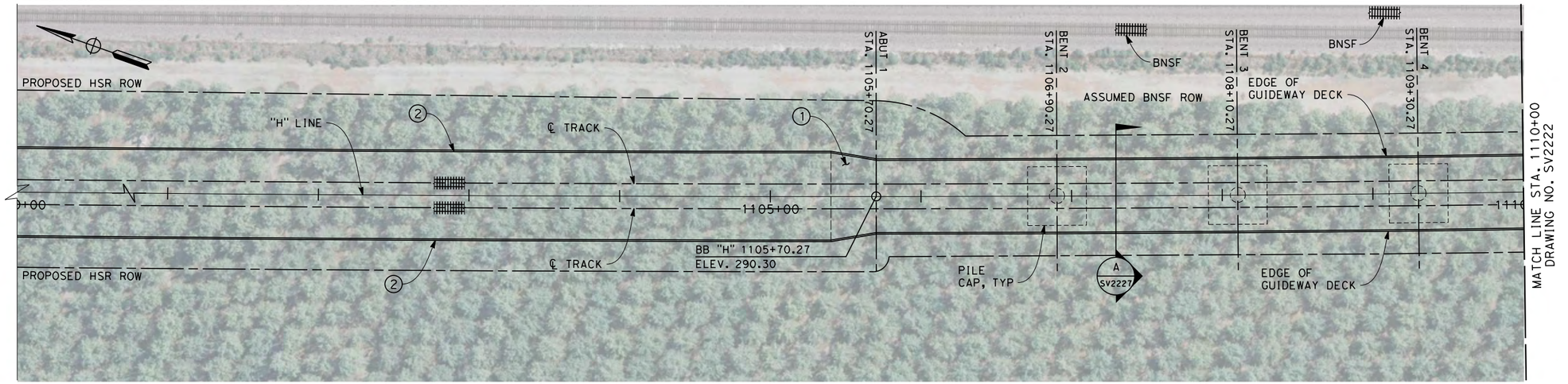
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2220
SCALE AS SHOWN
SHEET NO. 1 OF 8

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TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

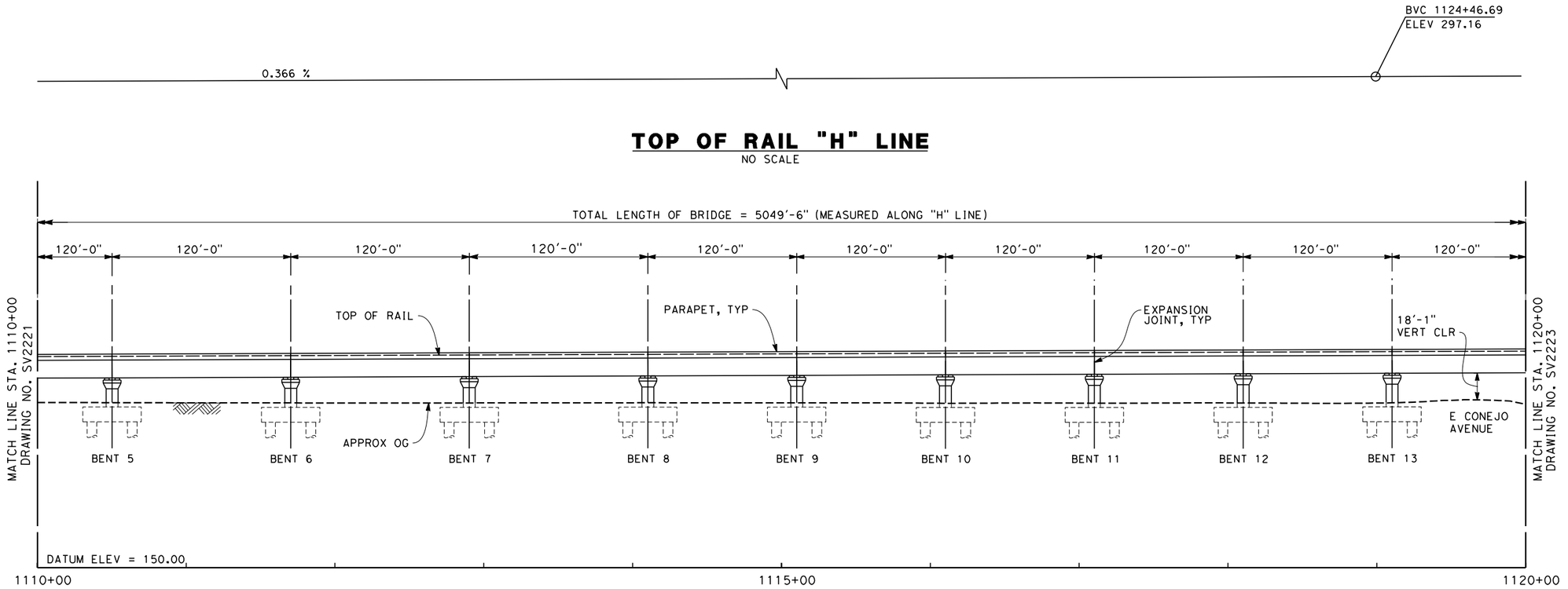
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

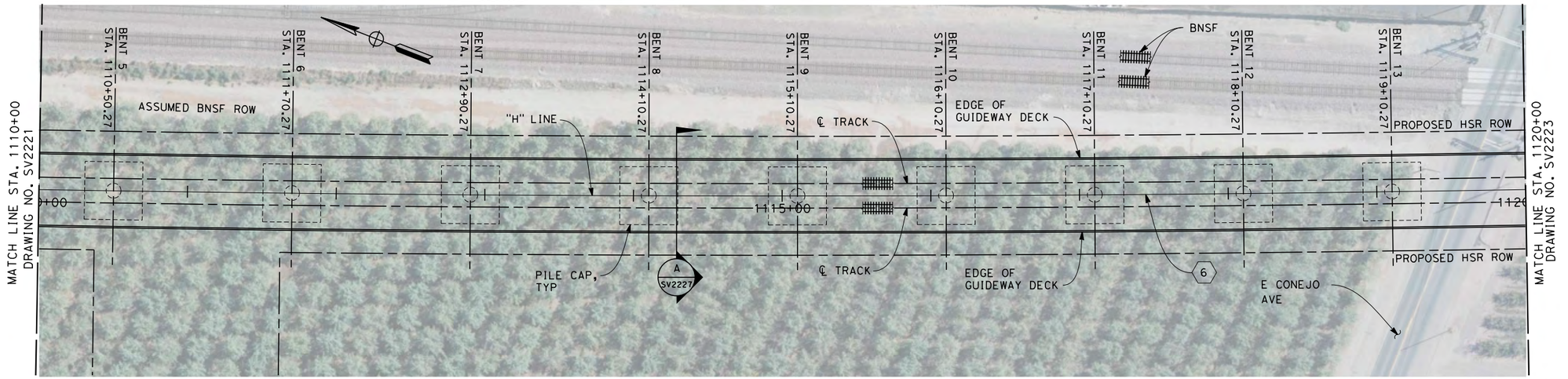
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2221
SCALE AS SHOWN
SHEET NO. 2 OF 8

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frank.palermo



TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
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LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(6)

R= 29000
Δ= 37°42'29"
T= 9903
L= 19086

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

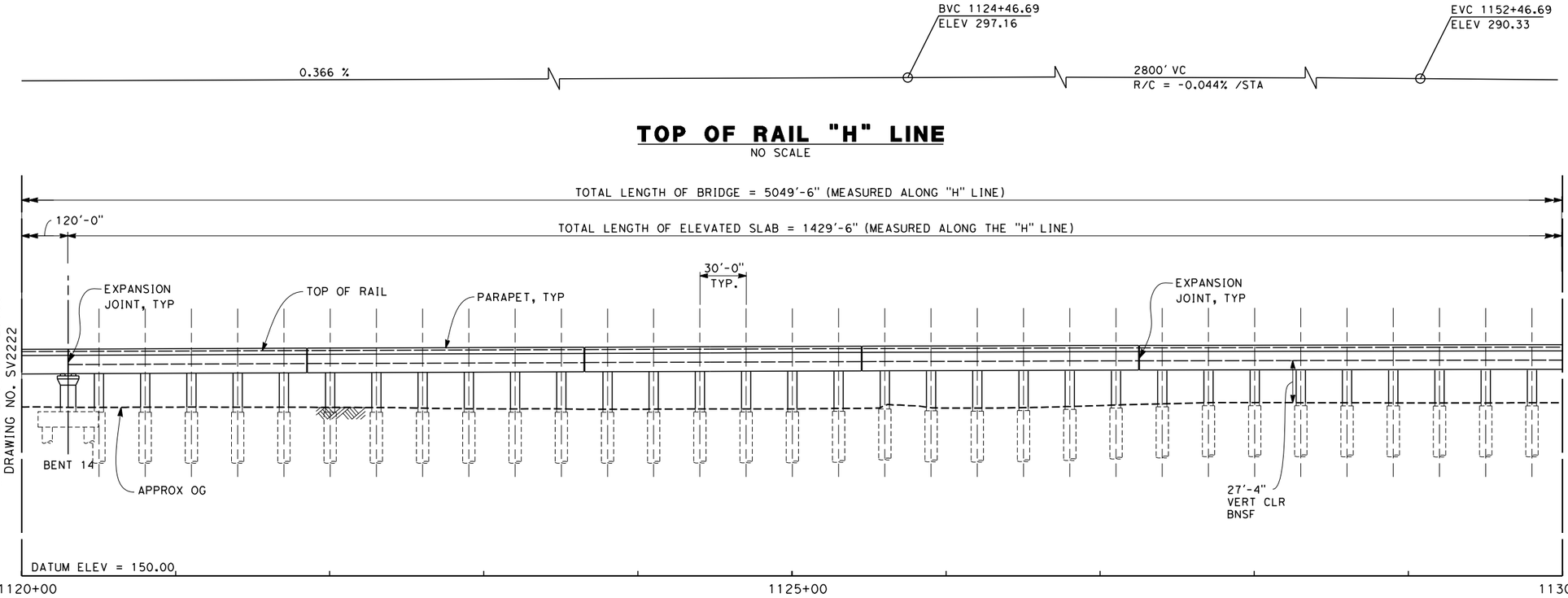
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2222
SCALE AS SHOWN
SHEET NO. 3 OF 8

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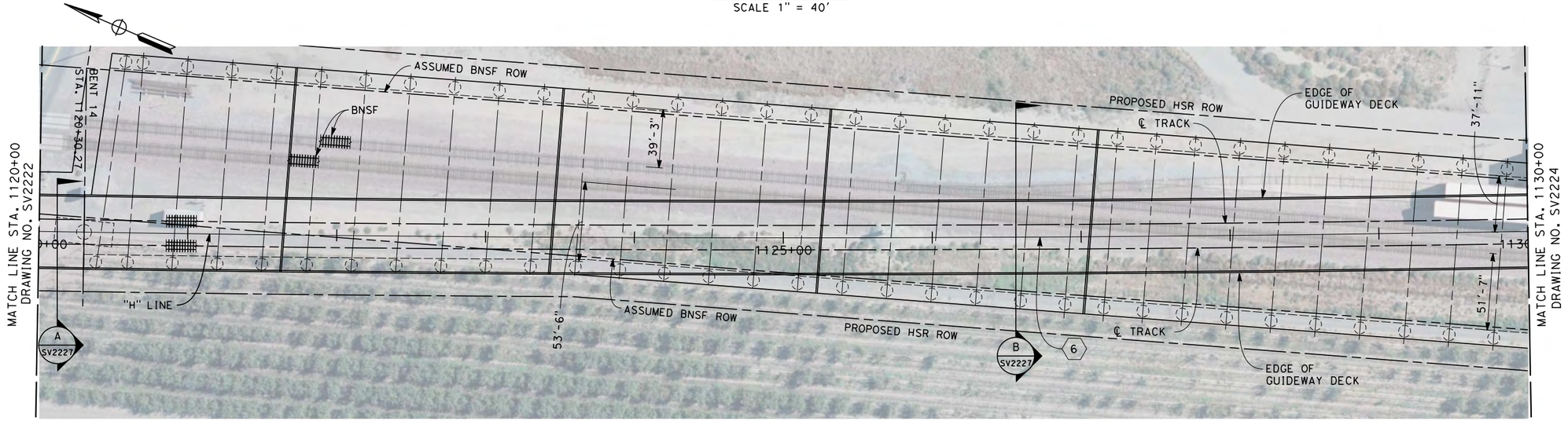


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(6)

R = 29000.00'
Δ = 37° 42' 29.3"
T = 9903.0'
L = 19085.8'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

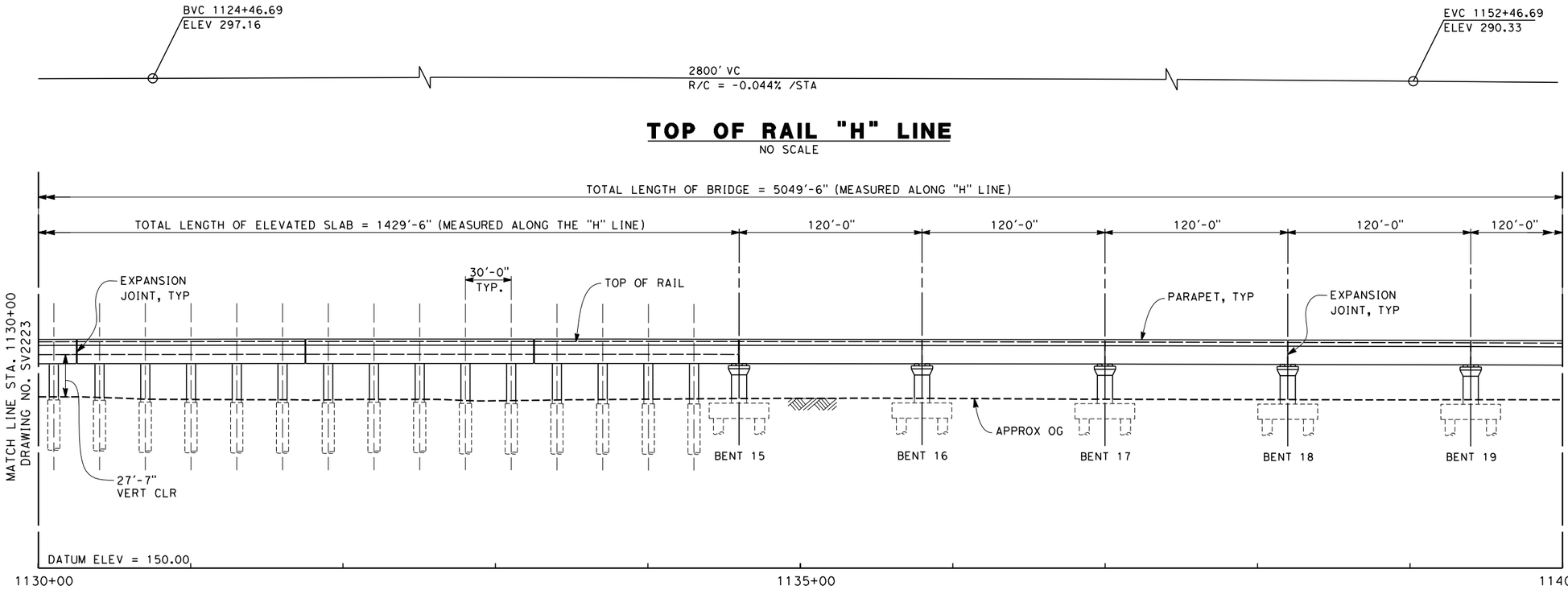
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2223
SCALE AS SHOWN
SHEET NO. 4 OF 8

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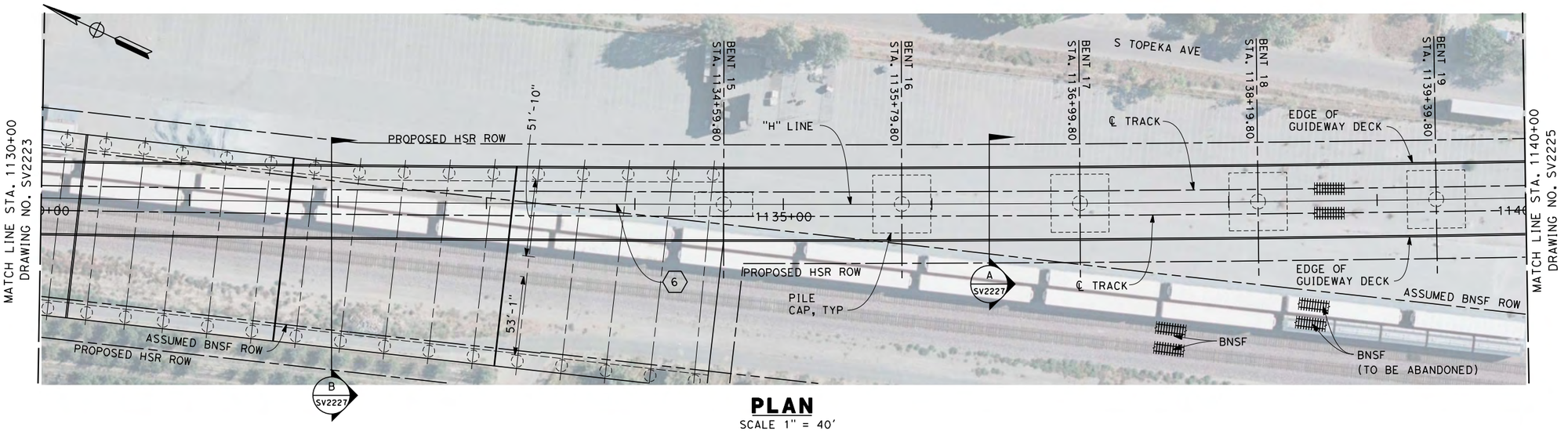


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
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   ELEVATED SLABS - PC BEAM AND INSITU SLAB
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(6)

R = 29000.00'
Δ = 37° 42' 29.3"
T = 9903.0'
L = 19085.8'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

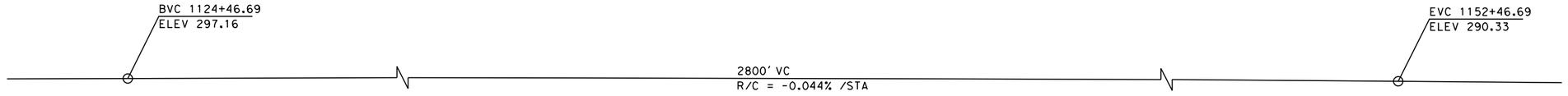
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

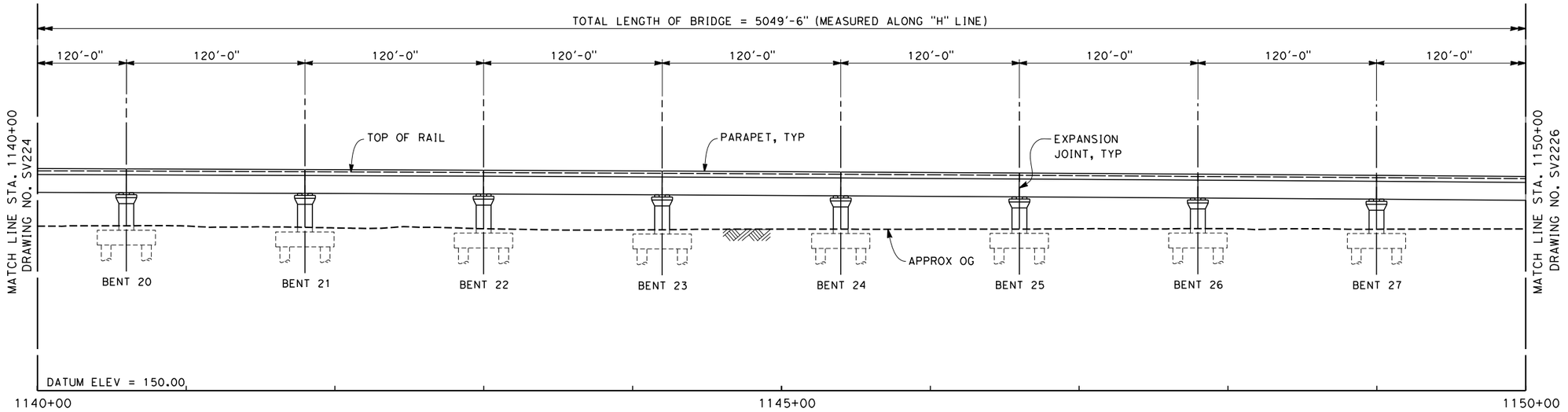
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2224
SCALE AS SHOWN
SHEET NO. 5 OF 8

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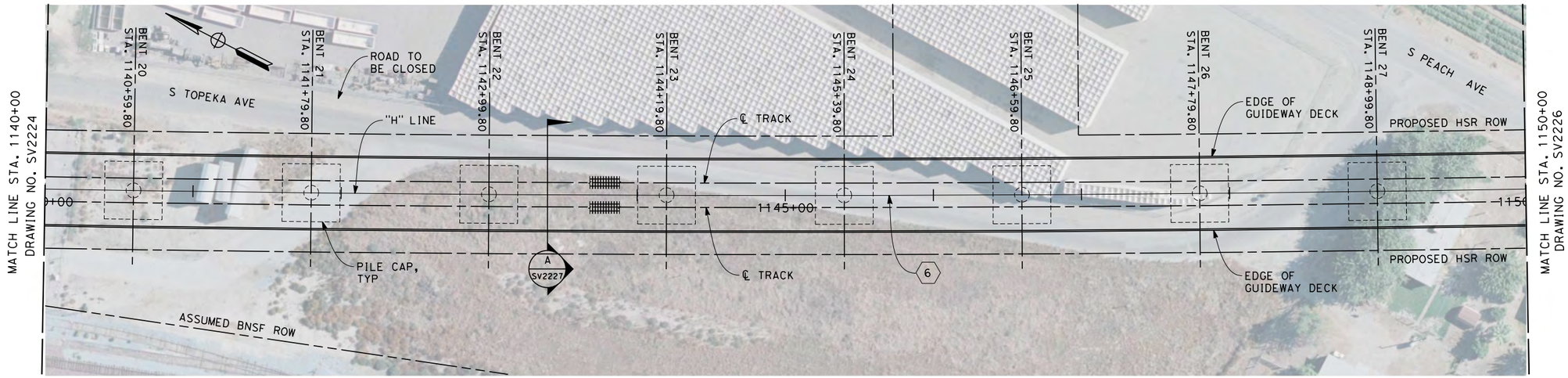
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(6)

R = 29000.00'
Δ = 37° 42' 29.3"
T = 9903.0'
L = 19085.8'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

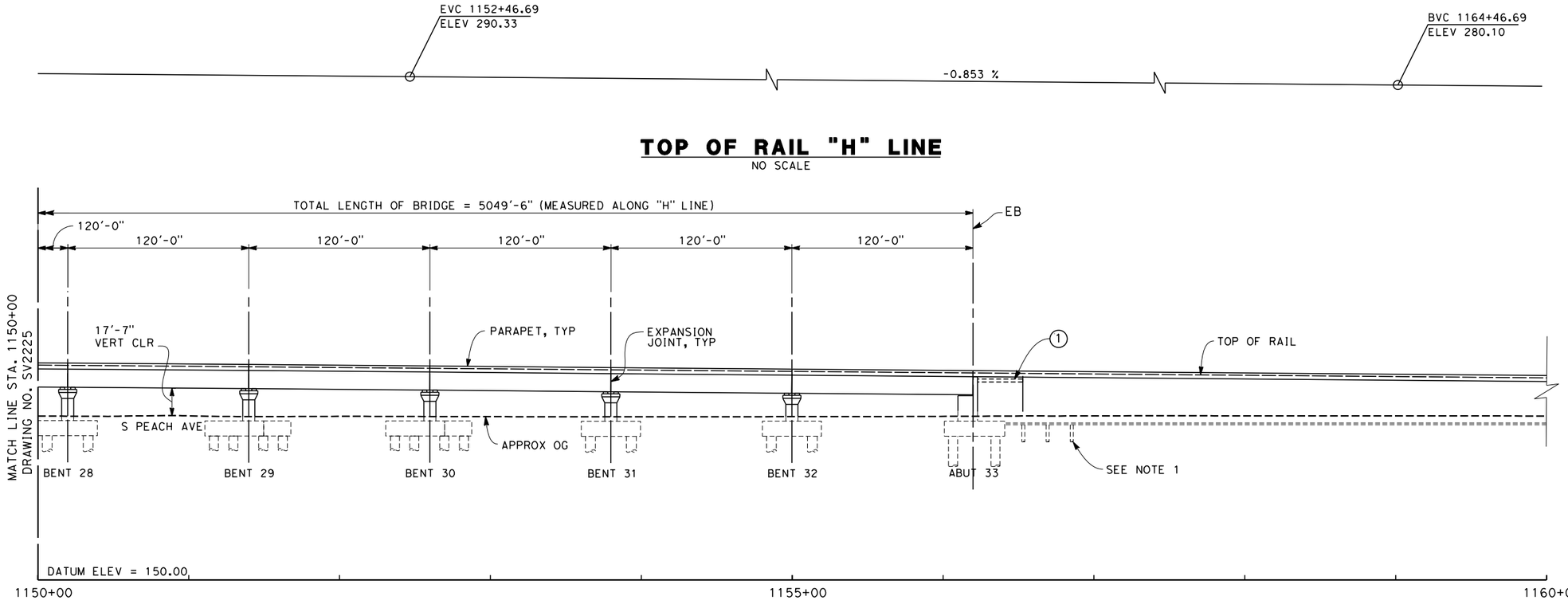
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2225
SCALE AS SHOWN
SHEET NO. 6 OF 8

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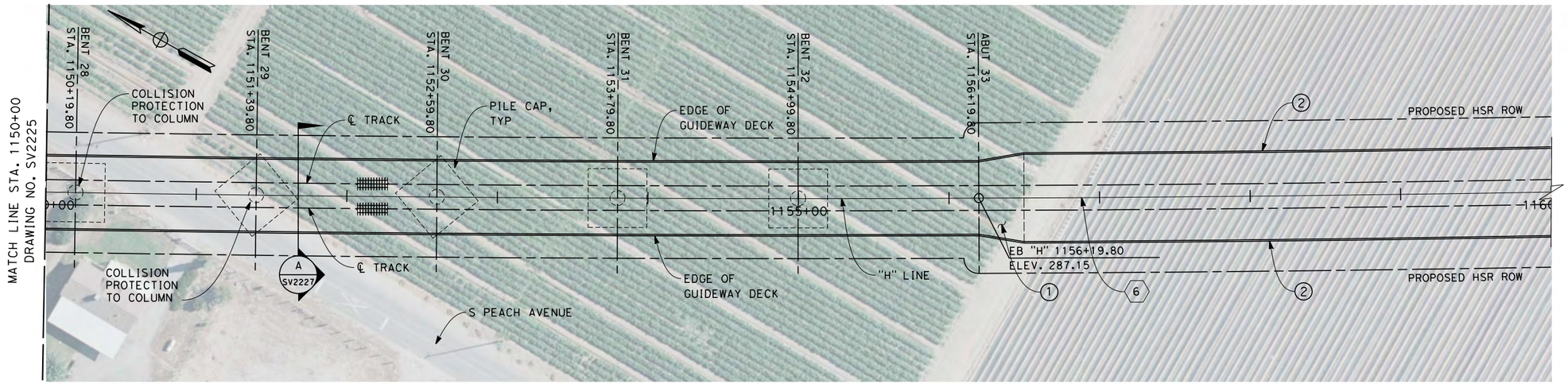


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(6)

R = 29000.00'
Δ = 37° 42' 29.3"
T = 9903.0'
L = 19085.8'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

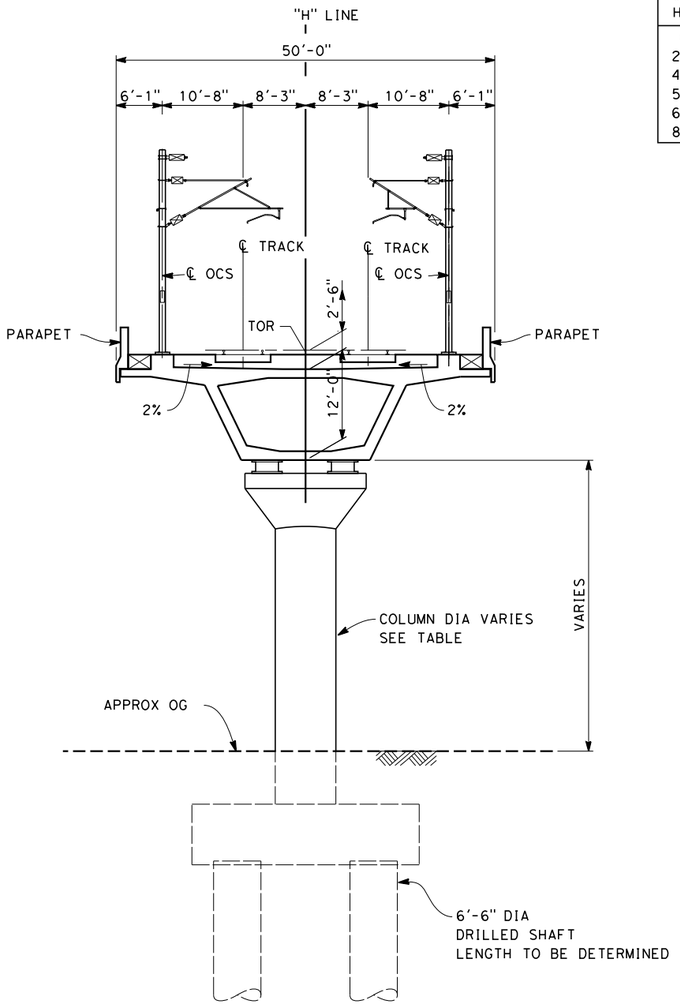
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2226
SCALE AS SHOWN
SHEET NO. 7 OF 8

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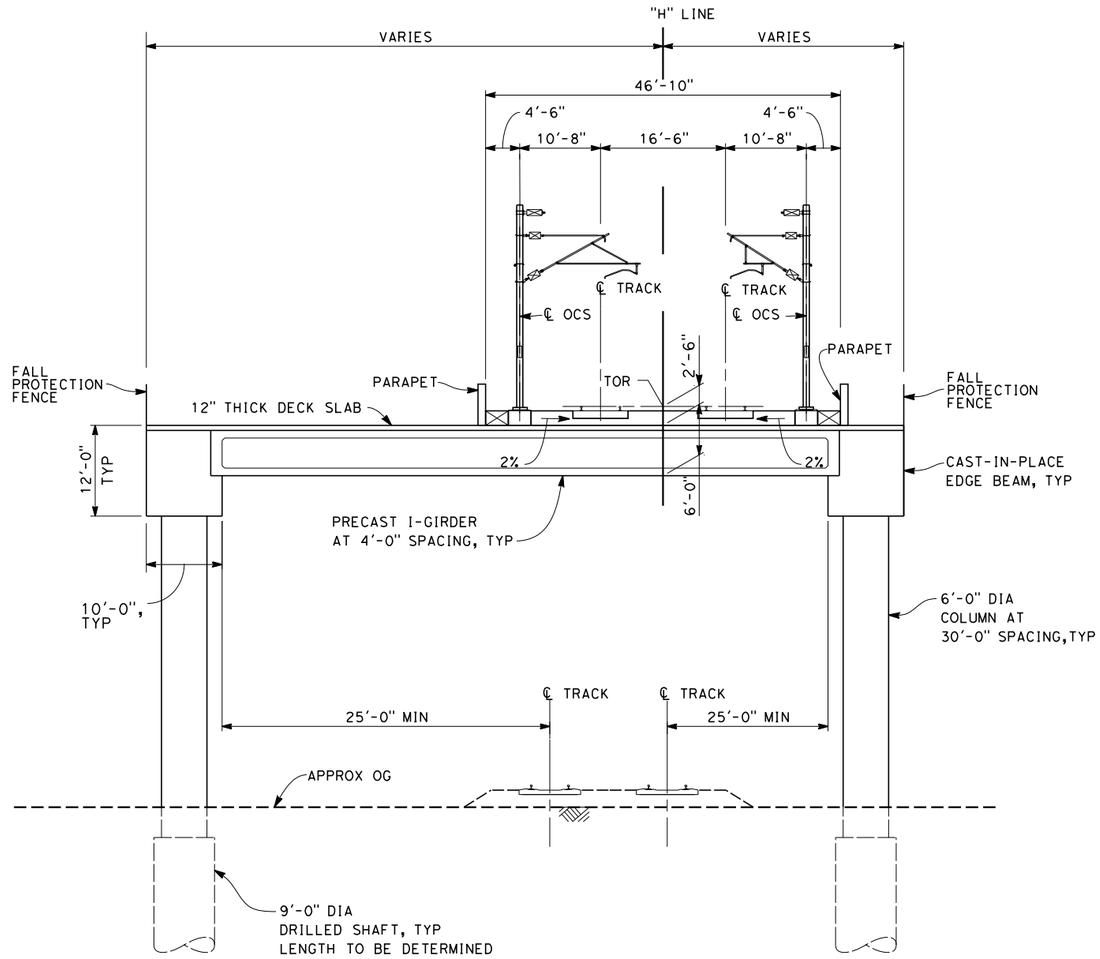
COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



SECTION A

SCALE: 1" = 10'

STA 1105+70 THROUGH 1123+80
STA 1133+40 THROUGH 1156+20



SECTION B

SCALE: 1" = 10'

STA 1123+80 THROUGH 1133+40

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
CONEJO VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2227
SCALE AS SHOWN
SHEET NO. 8 OF 8

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY E. SUDHAUSEN
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

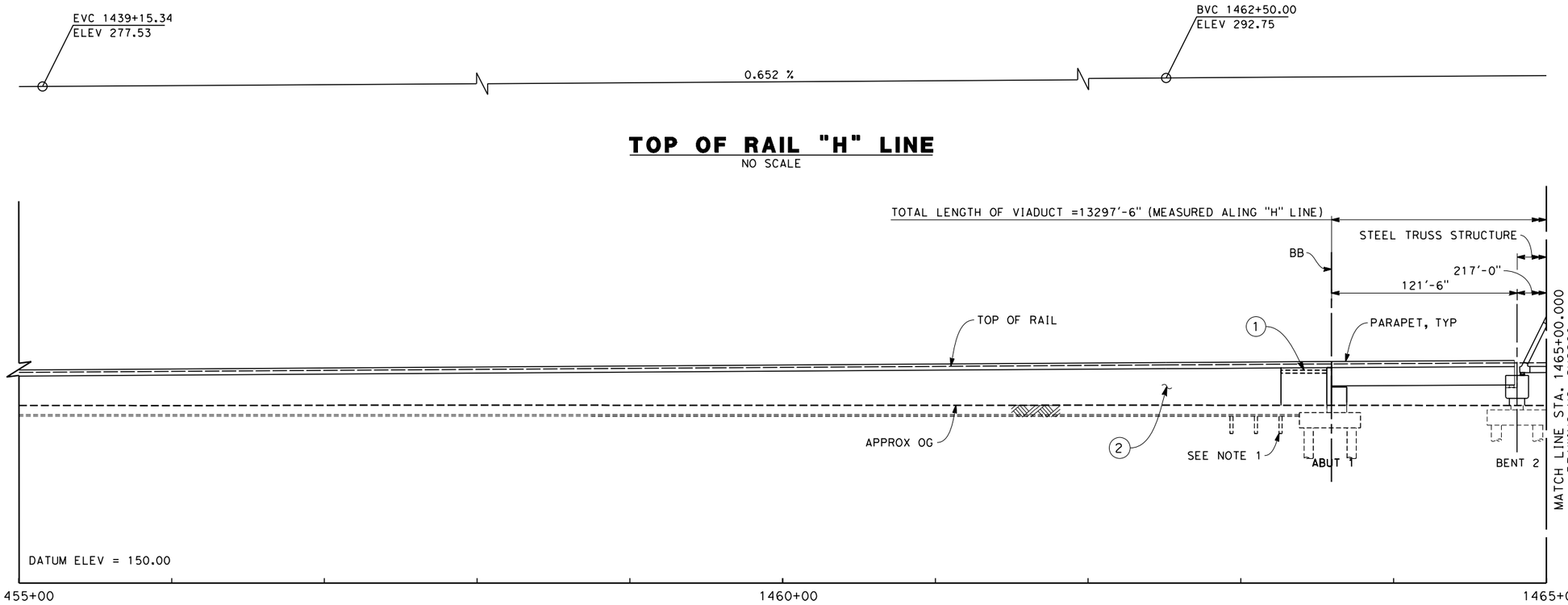
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
KEY MAP

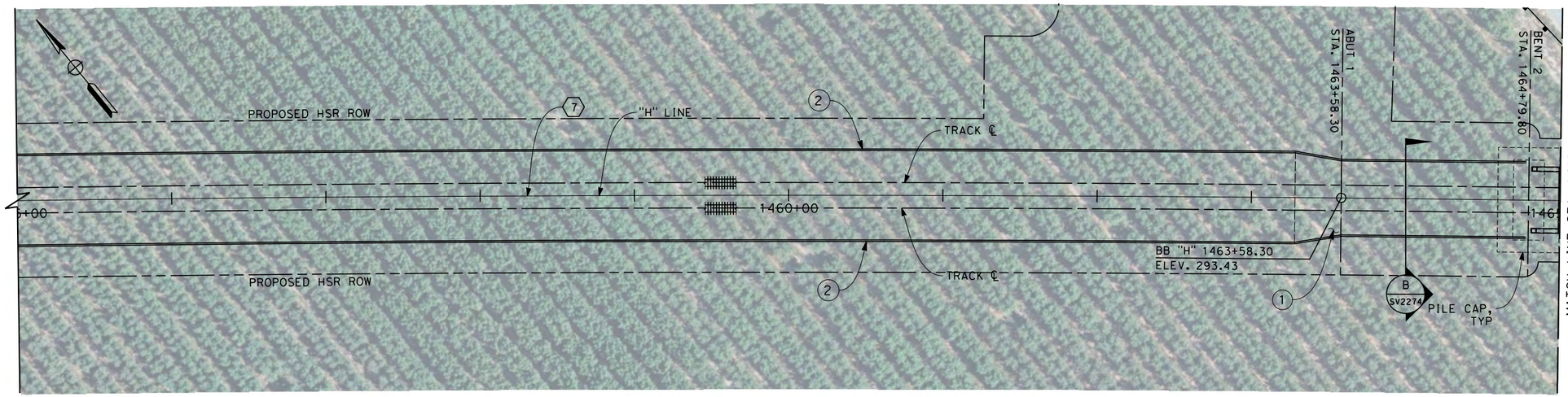
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2258
SCALE AS SHOWN
SHEET NO. 1 OF 18

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TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(7)
R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

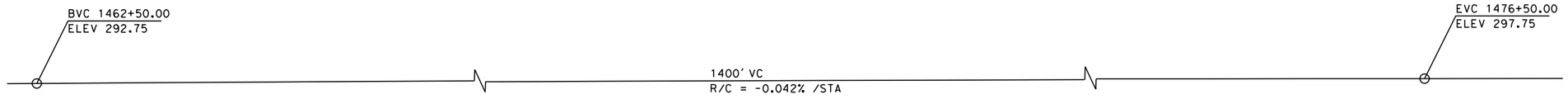
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

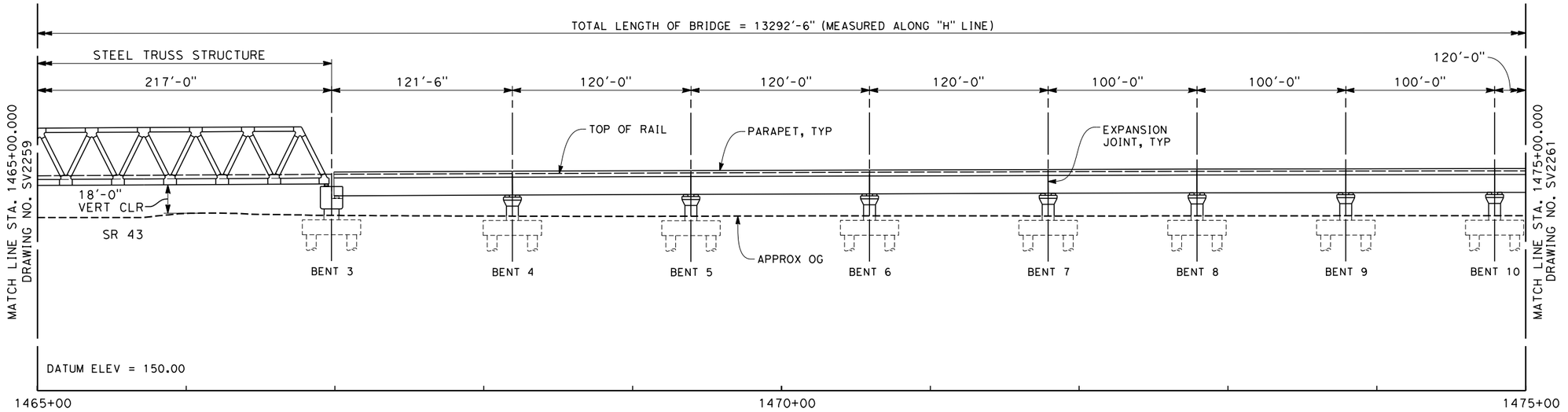
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2259
SCALE AS SHOWN
SHEET NO. 2 OF 18

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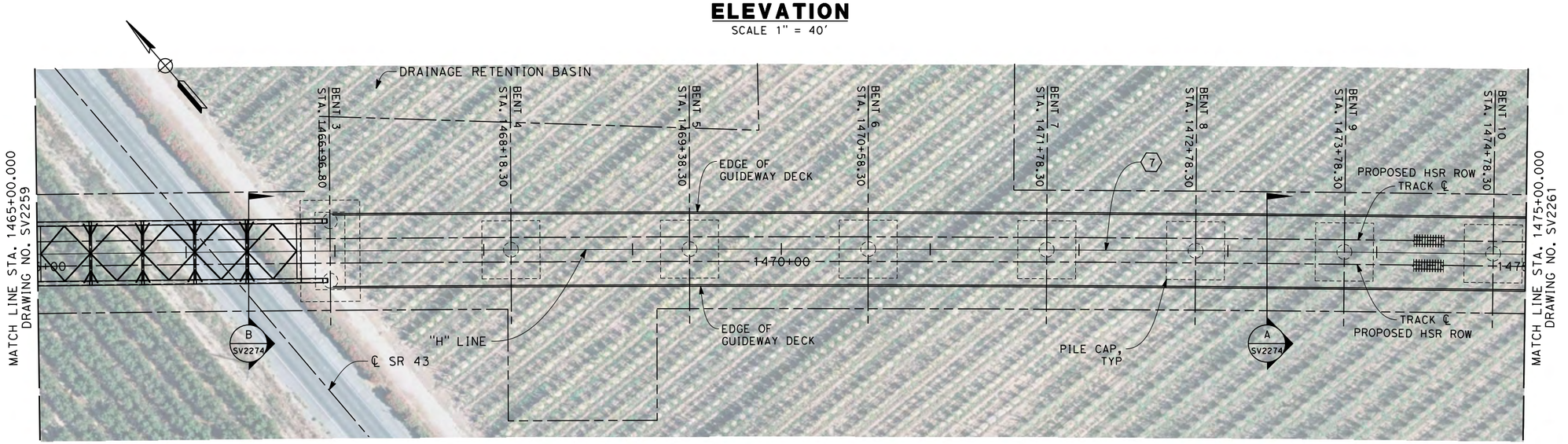
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

⟨7⟩

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

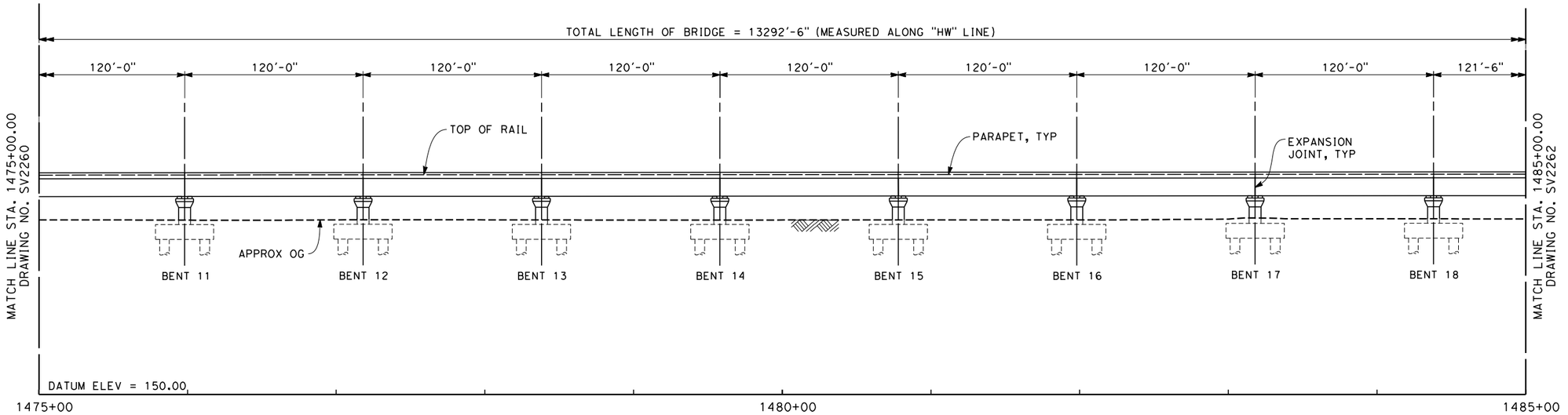
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2260
SCALE AS SHOWN
SHEET NO. 3 OF 18

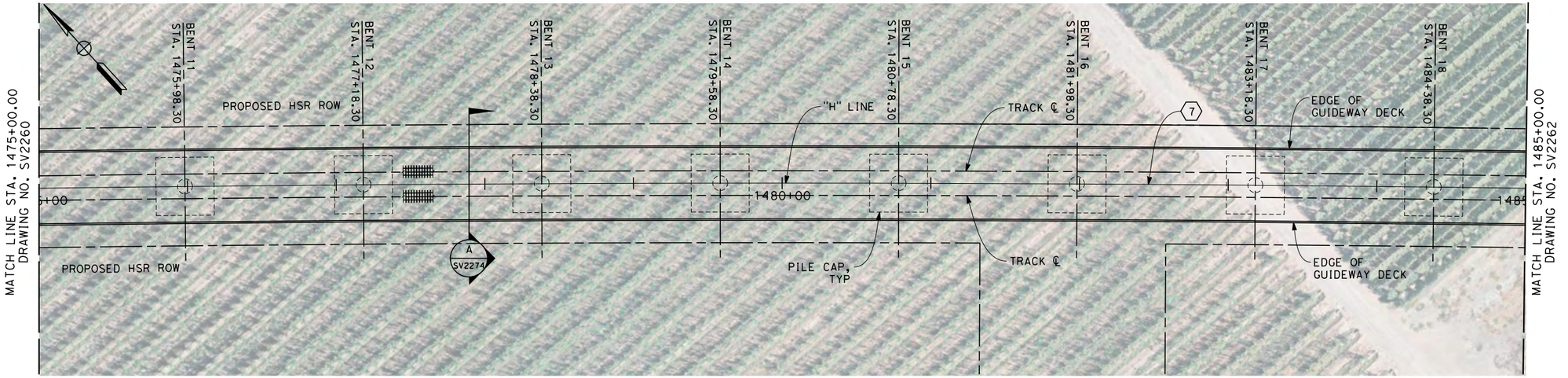
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TOP OF RAIL "H" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

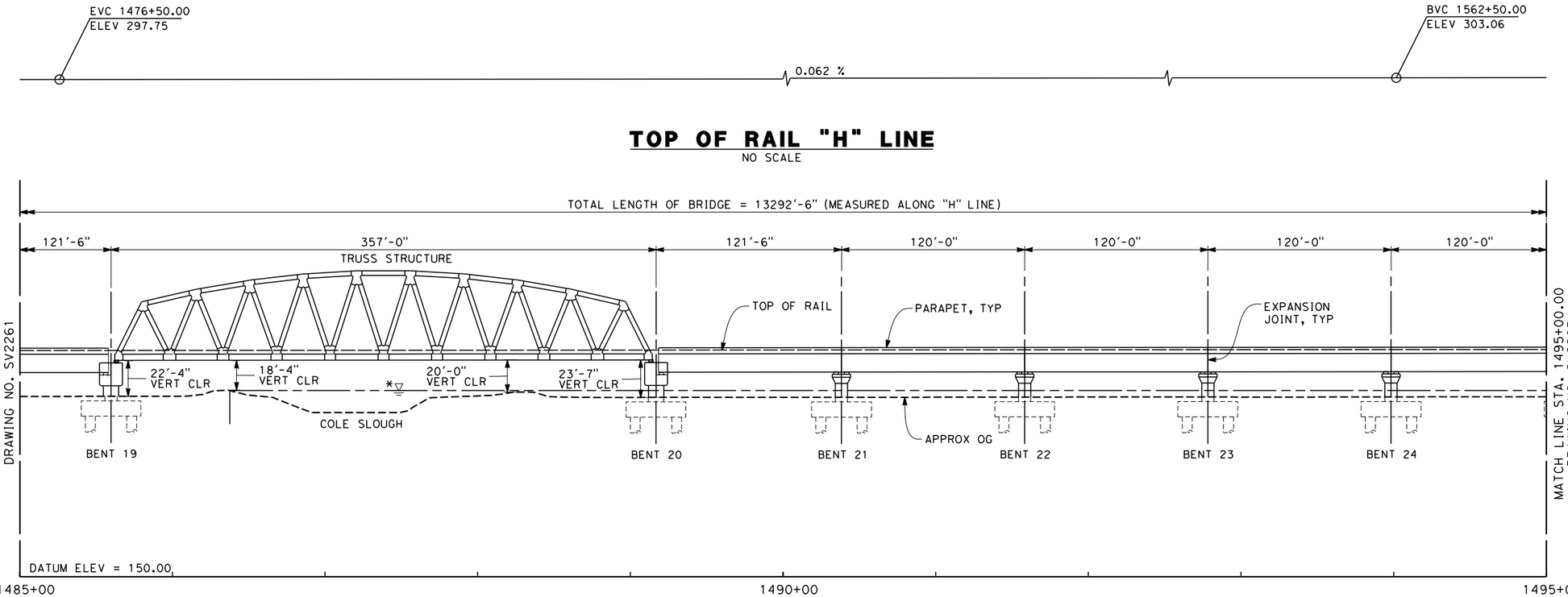
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2261
SCALE AS SHOWN
SHEET NO. 4 OF 18

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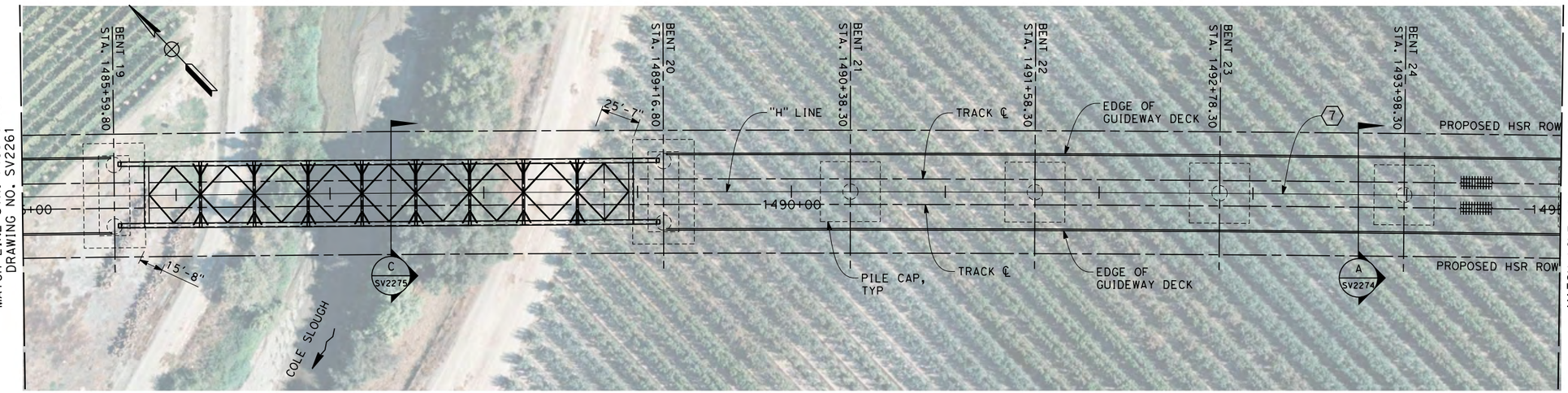


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY D. ORIZA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

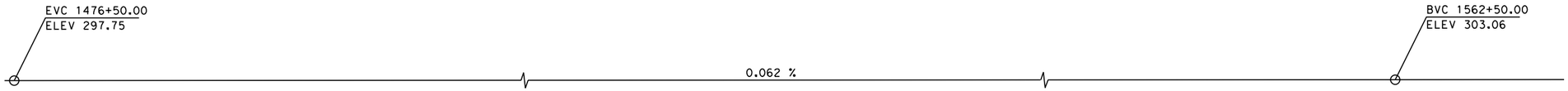
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

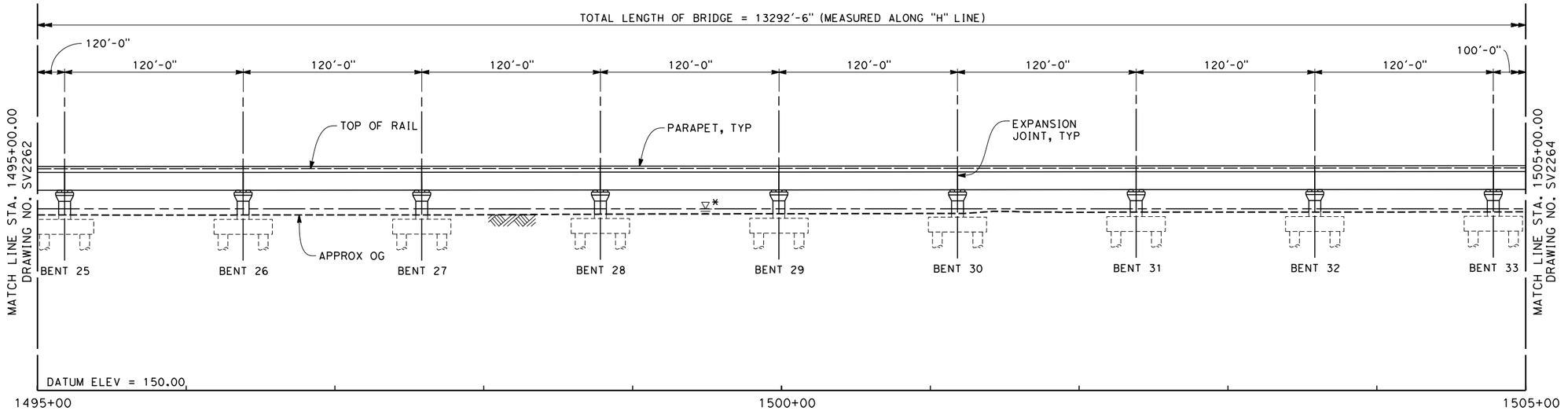
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2262
SCALE AS SHOWN
SHEET NO. 5 OF 18

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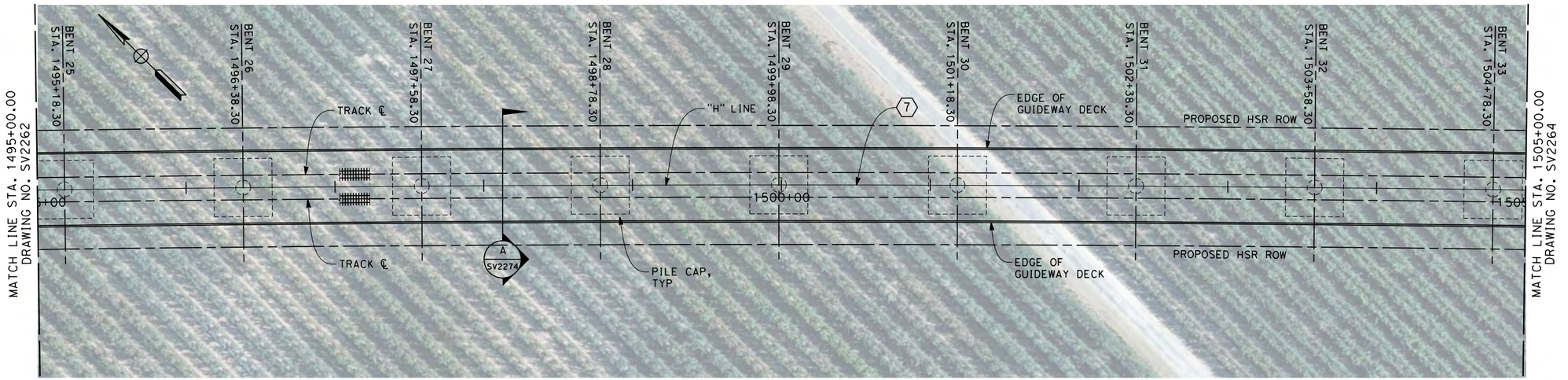
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY D. ORIZA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

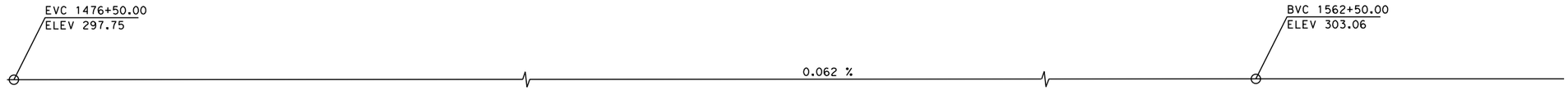
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

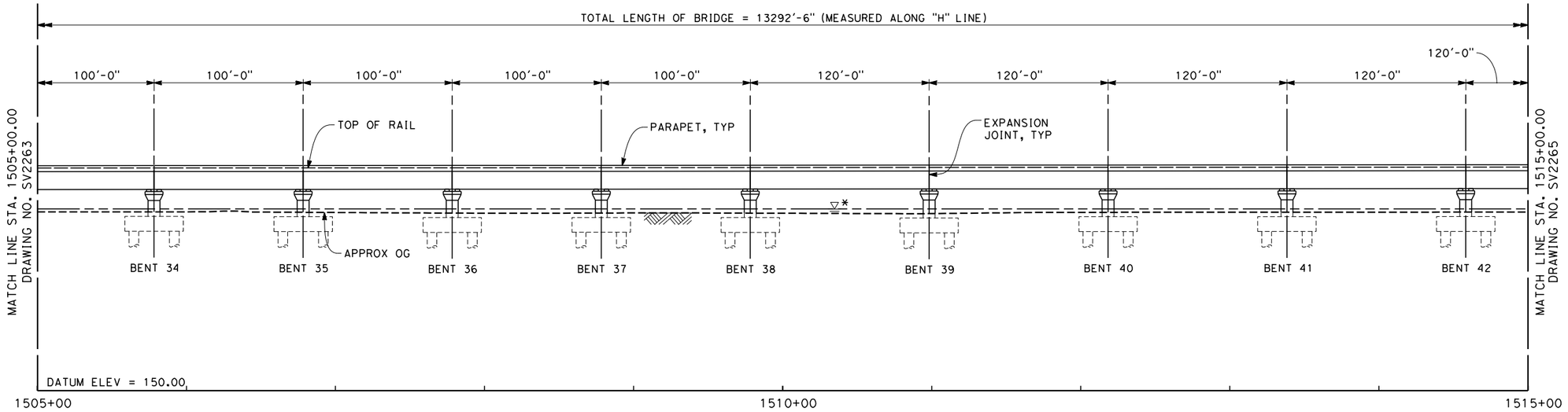
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2263
SCALE AS SHOWN
SHEET NO. 6 OF 18

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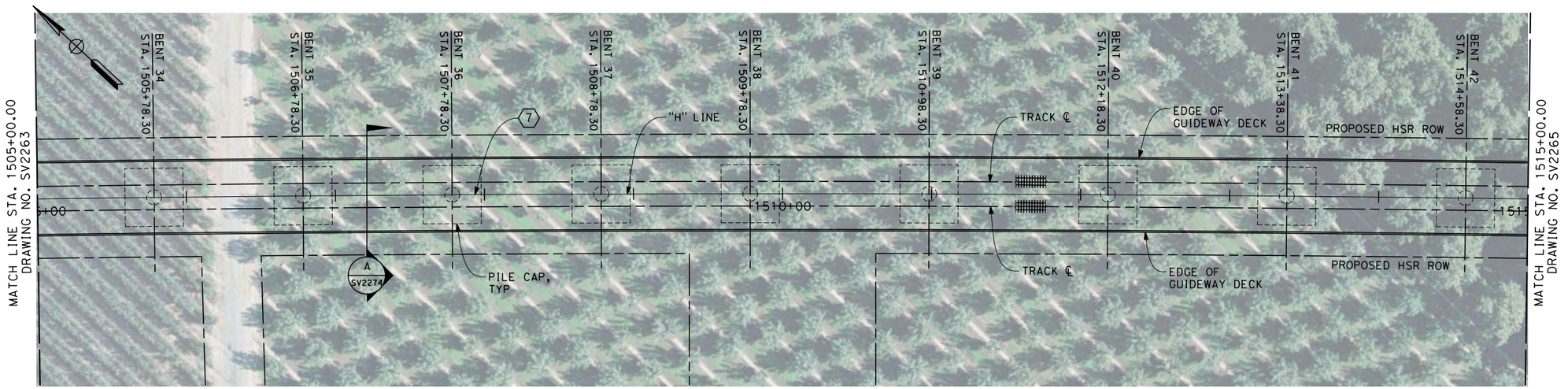
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

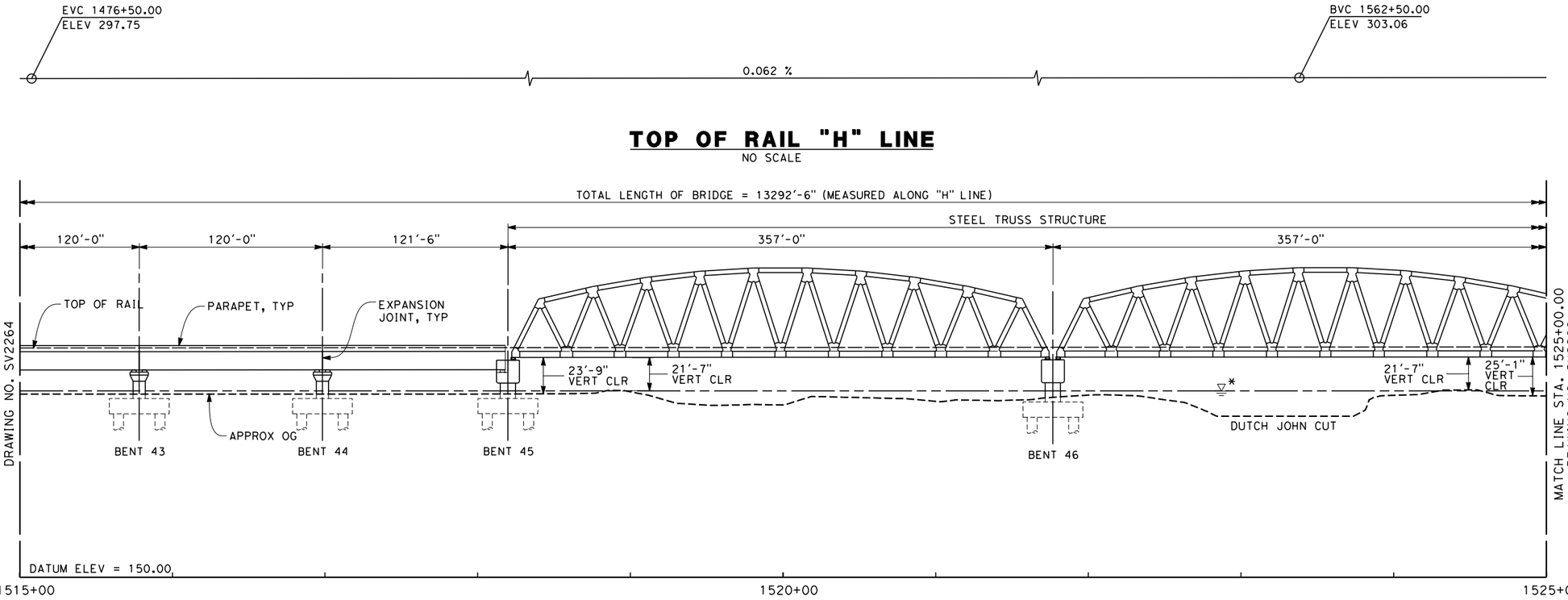
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

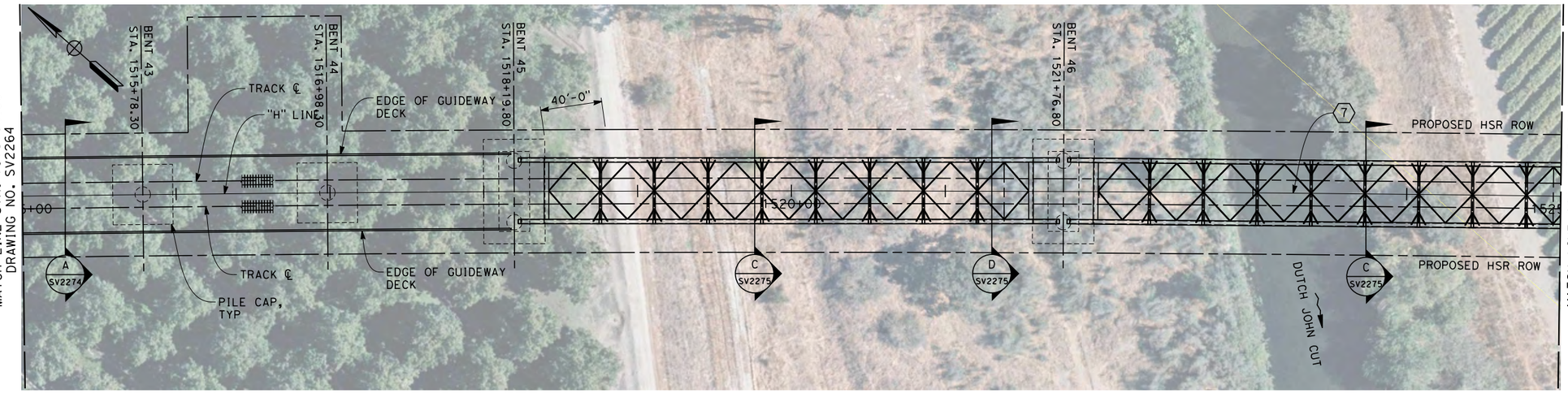
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2264
SCALE AS SHOWN
SHEET NO. 7 OF 18

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ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

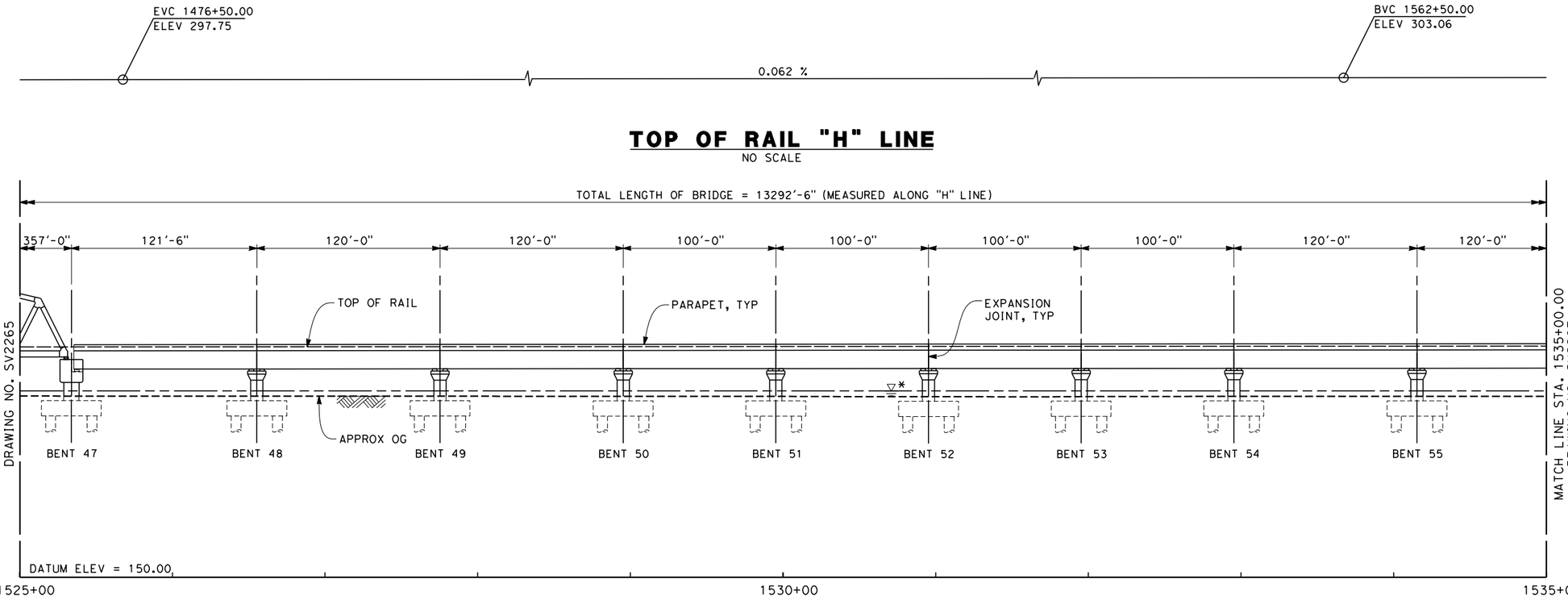
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2265
SCALE AS SHOWN
SHEET NO. 8 OF 18

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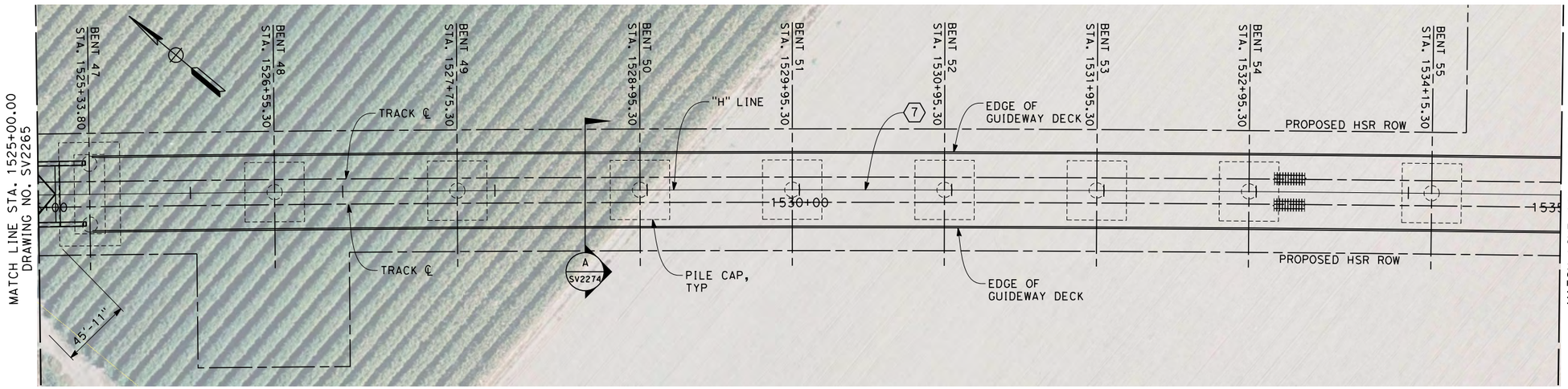


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

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T = 20271.5'
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40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

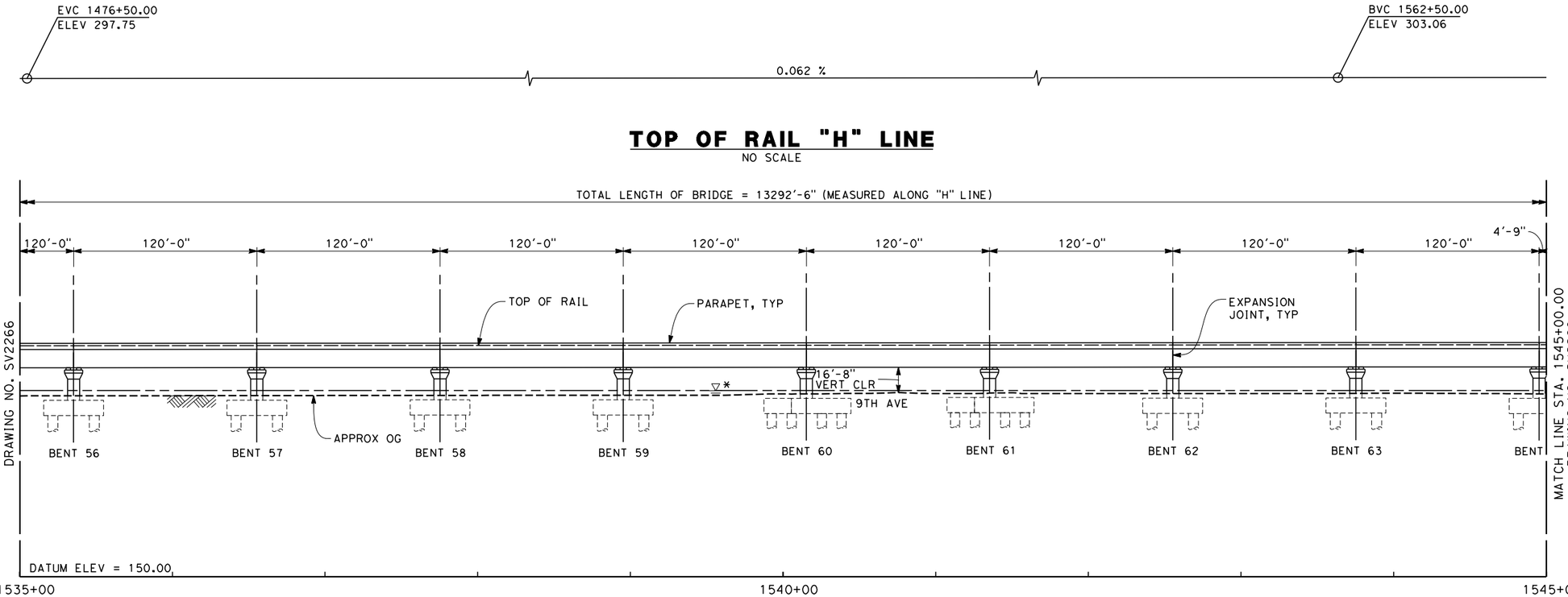
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

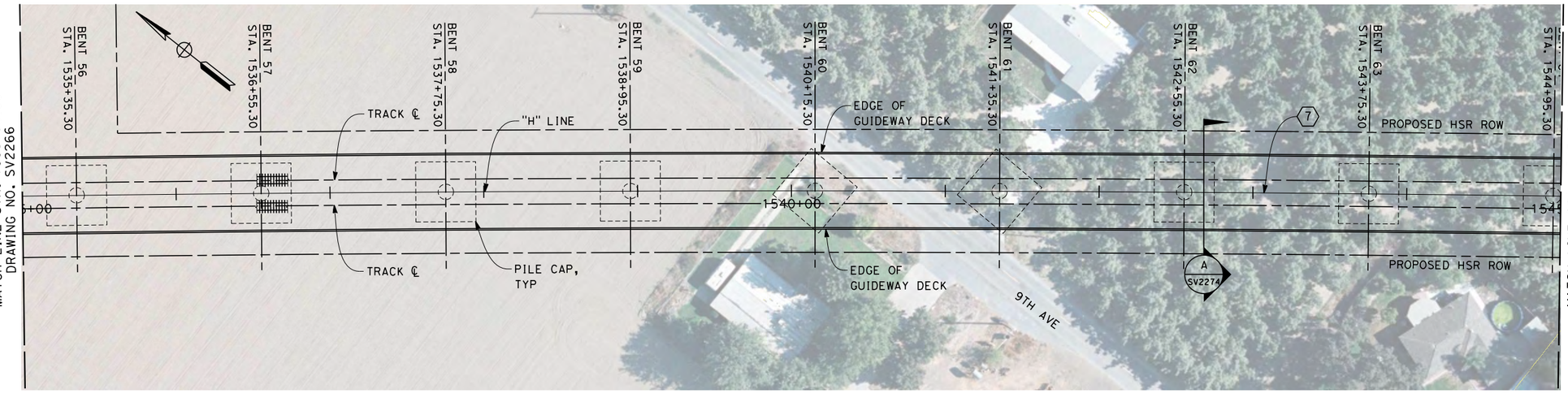
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2266
SCALE AS SHOWN
SHEET NO. 9 OF 18

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TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(7)
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Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

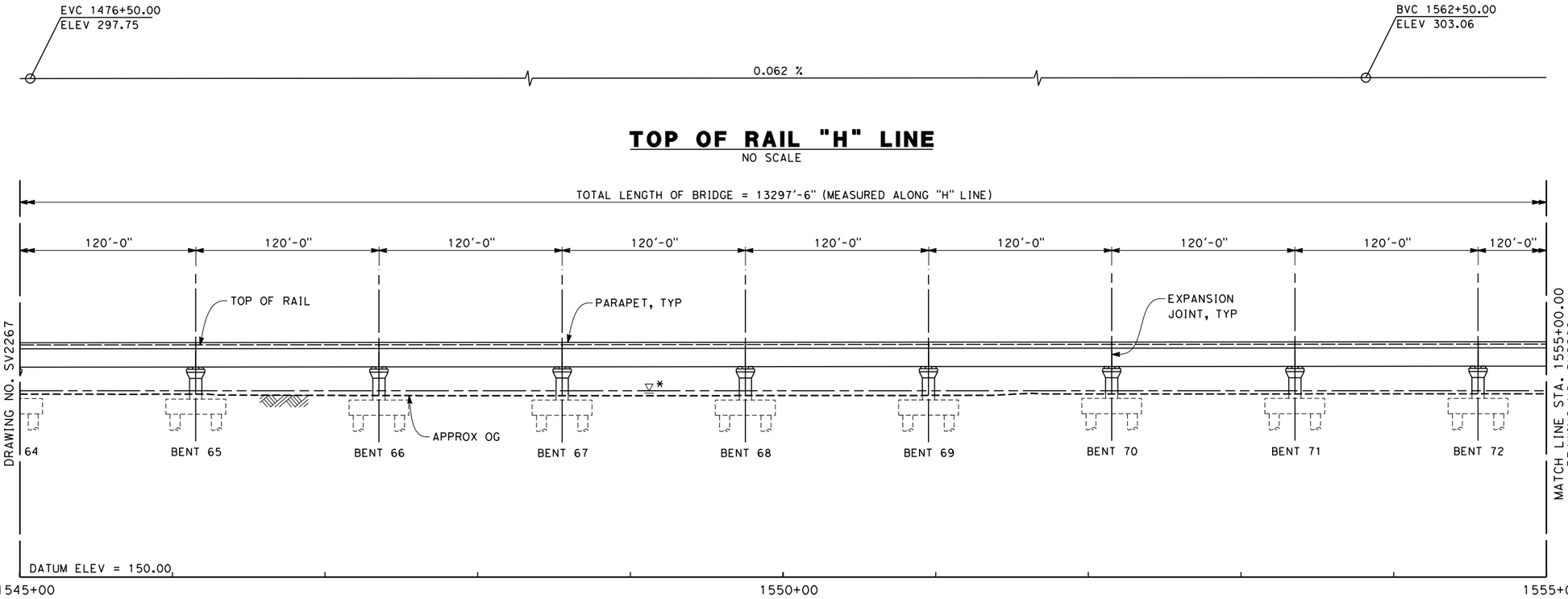
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2267
SCALE AS SHOWN
SHEET NO. 10 OF 18

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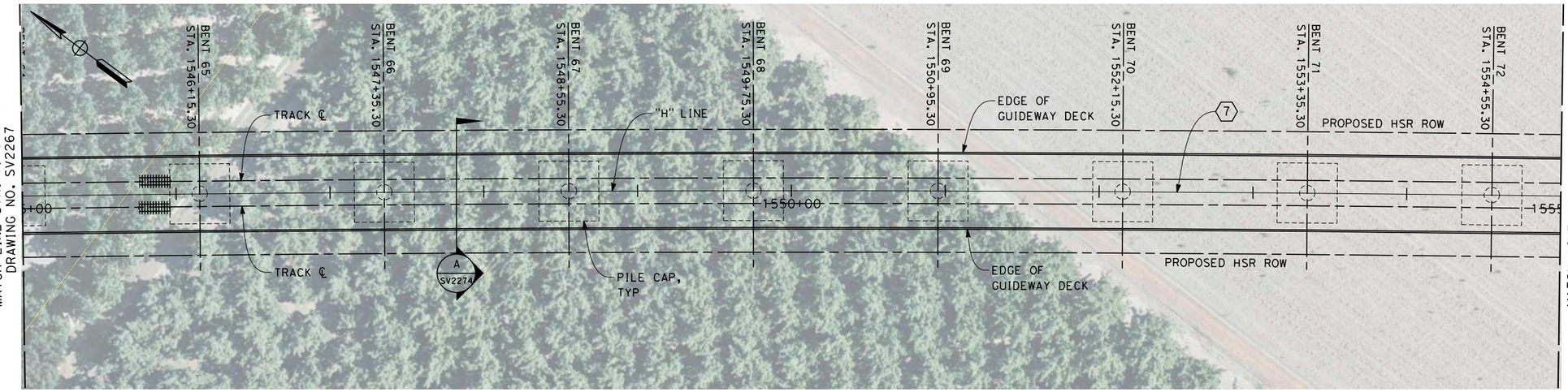


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

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T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

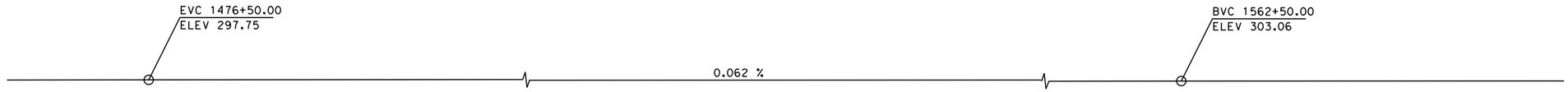
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

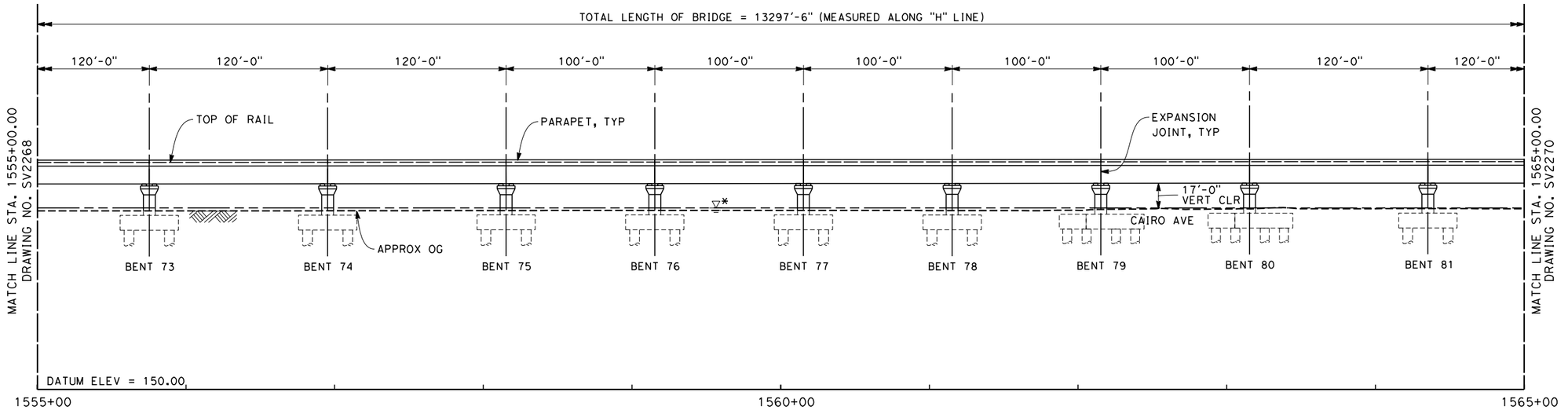
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2268
SCALE AS SHOWN
SHEET NO. 11 OF 18

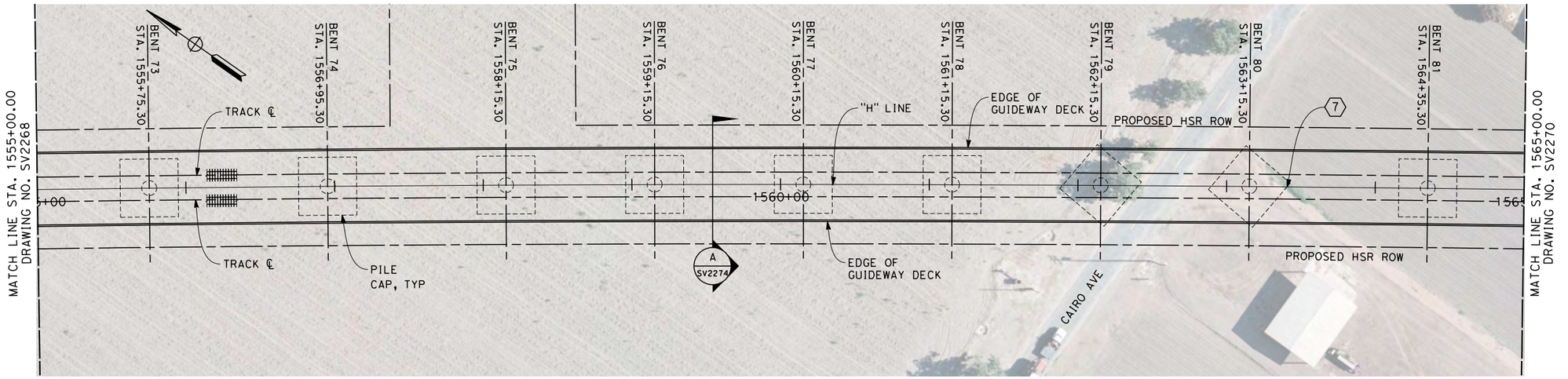
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TOP OF RAIL "H" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
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5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

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Δ = 58° 05' 38.8"
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L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

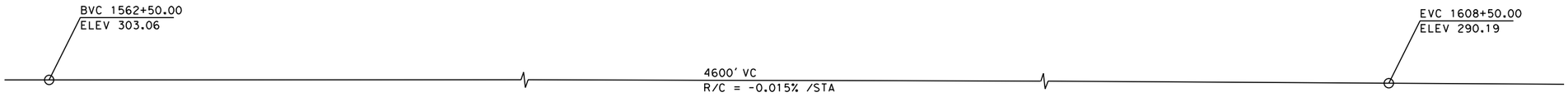
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

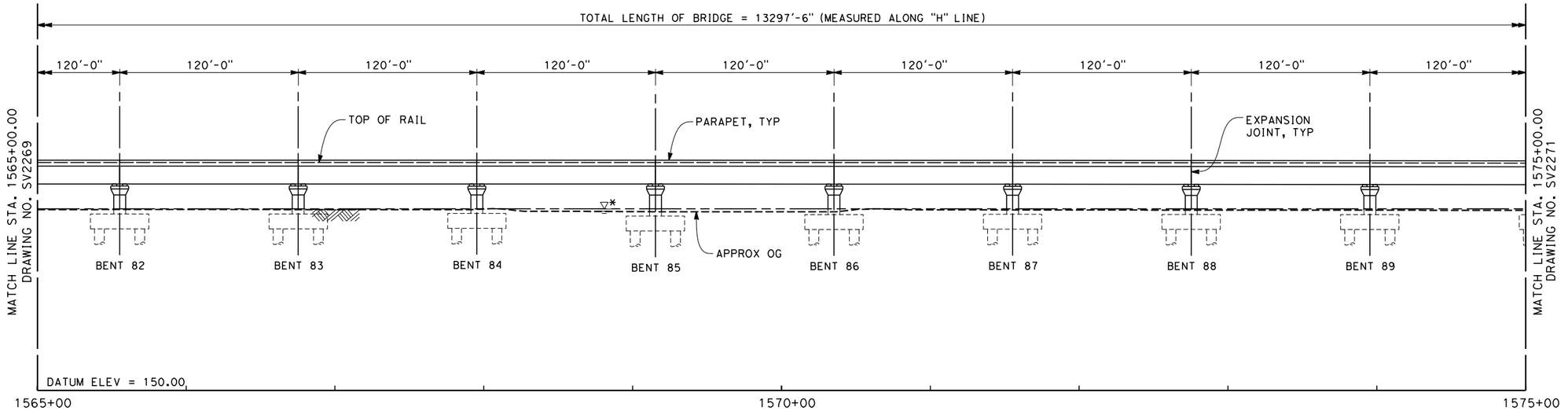
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2269
SCALE AS SHOWN
SHEET NO. 12 OF 18

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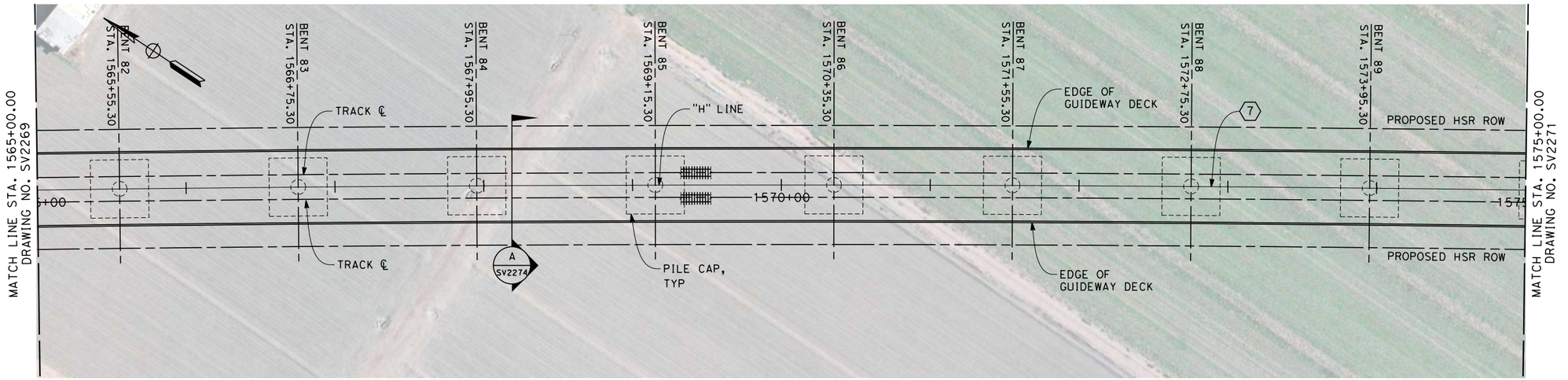
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

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40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

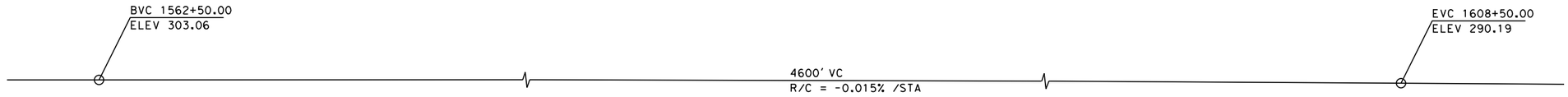
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

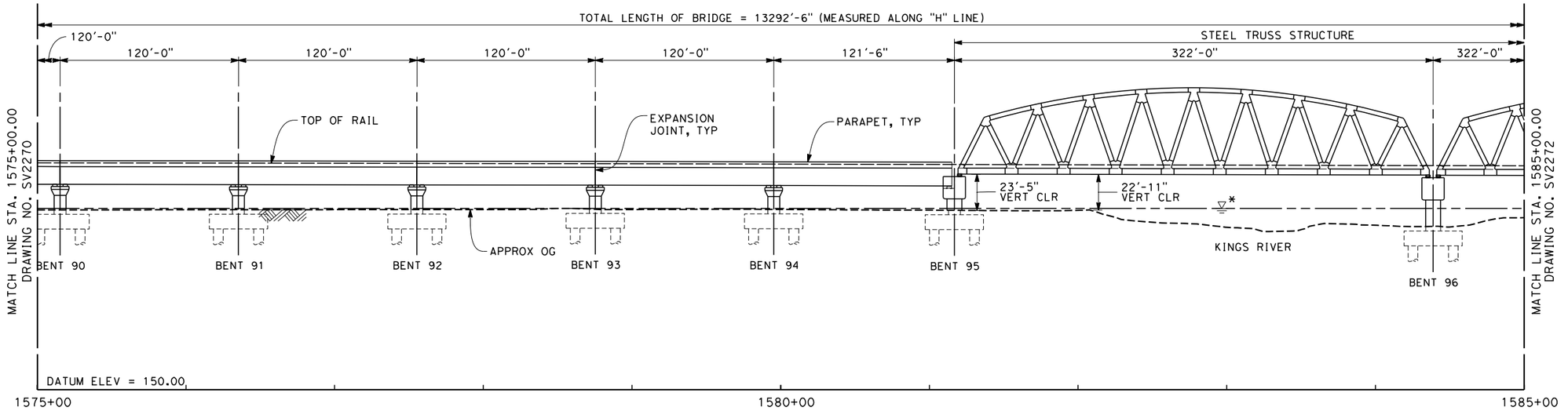
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2270
SCALE AS SHOWN
SHEET NO. 13 OF 18

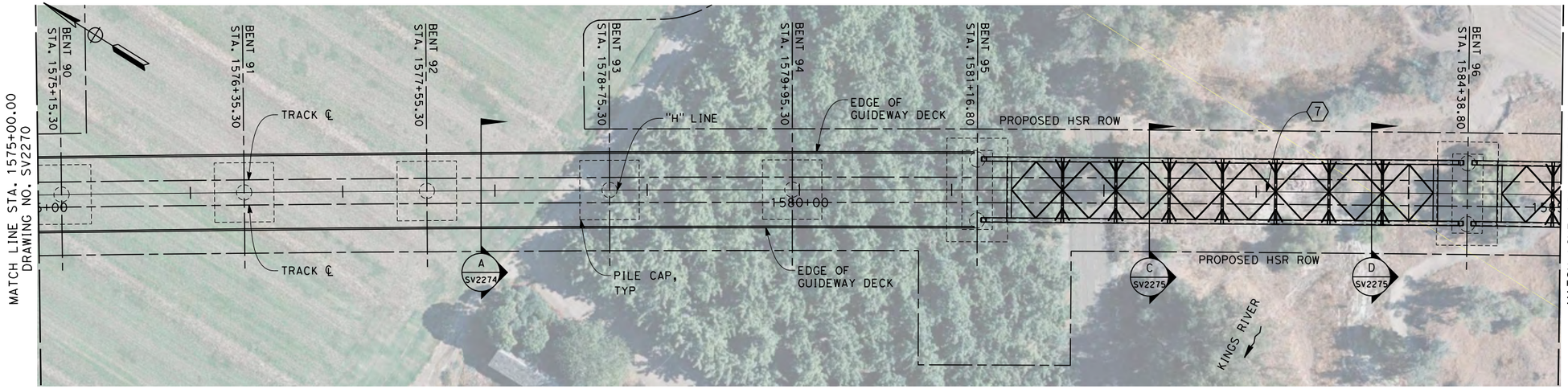
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TOP OF RAIL "H" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

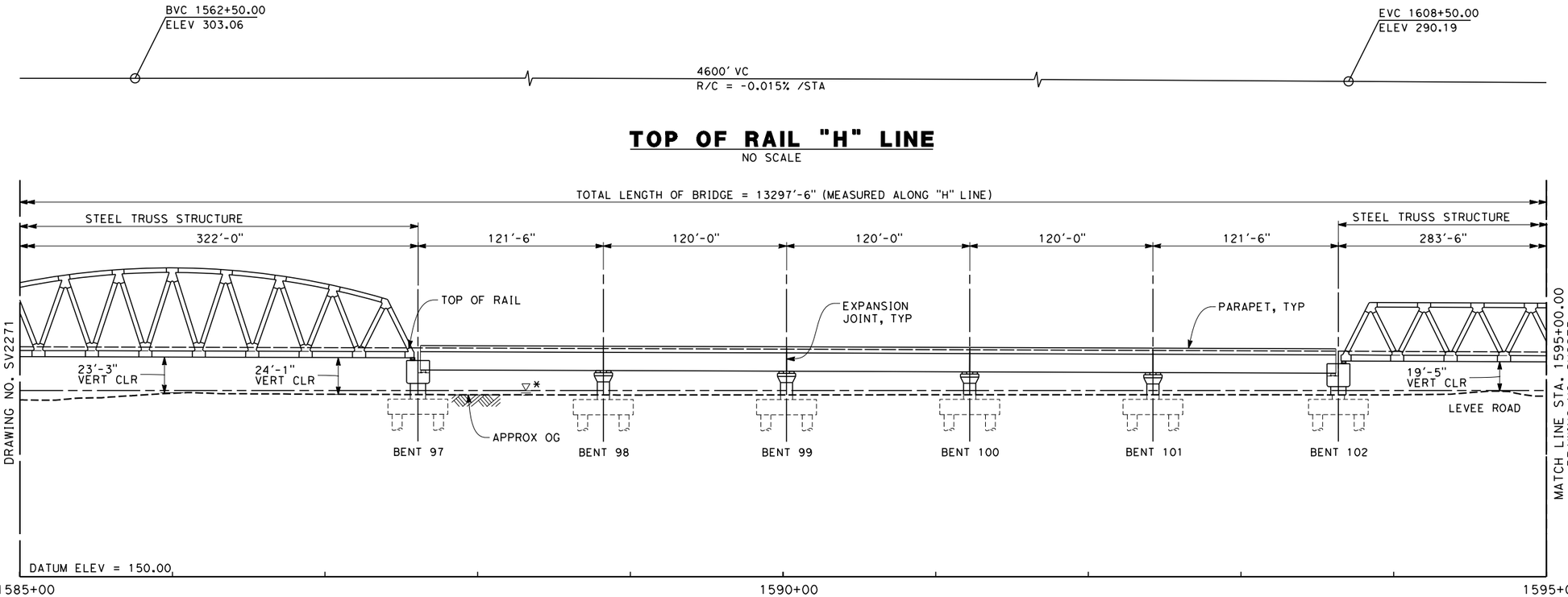
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

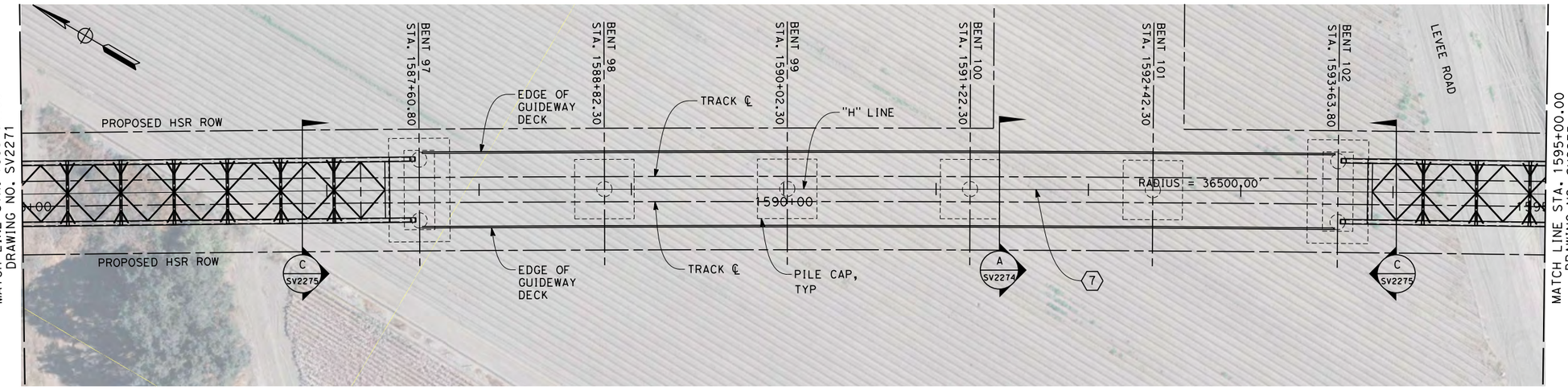
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2271
SCALE AS SHOWN
SHEET NO. 14 OF 18

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TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
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T = 20271.5'
L = 37008.6'

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1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
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DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

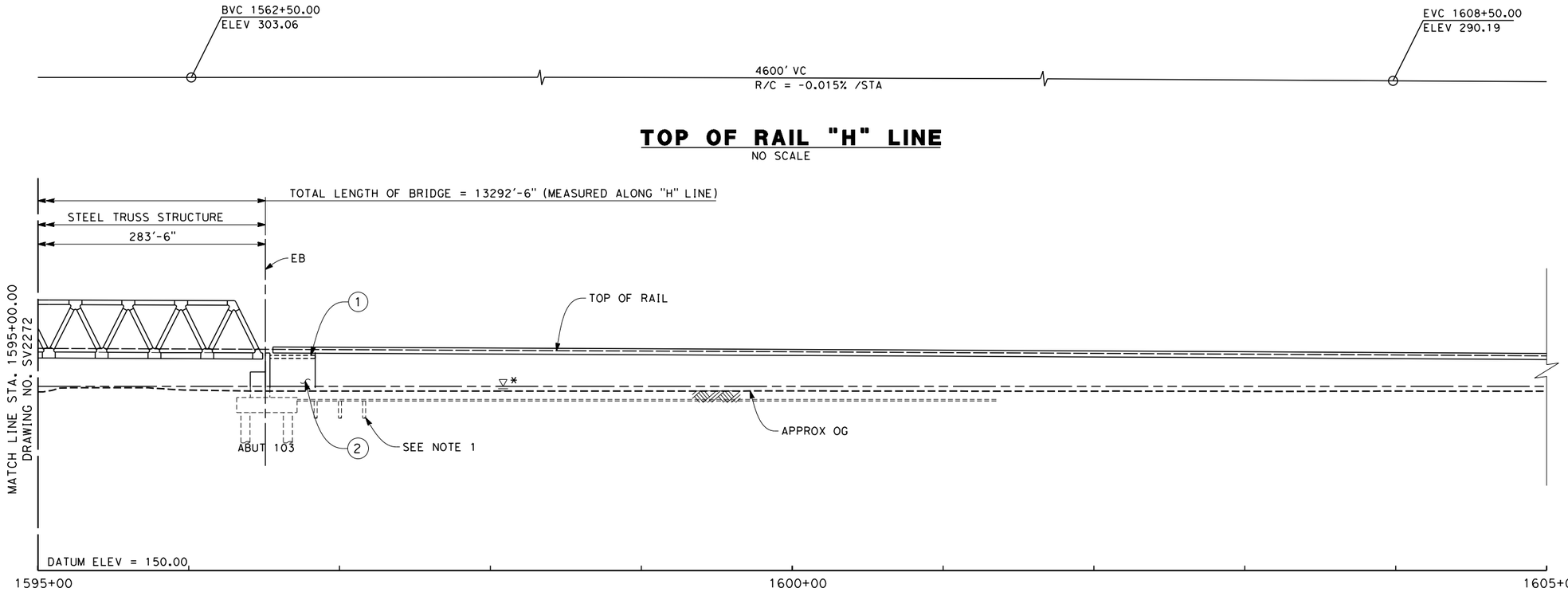
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

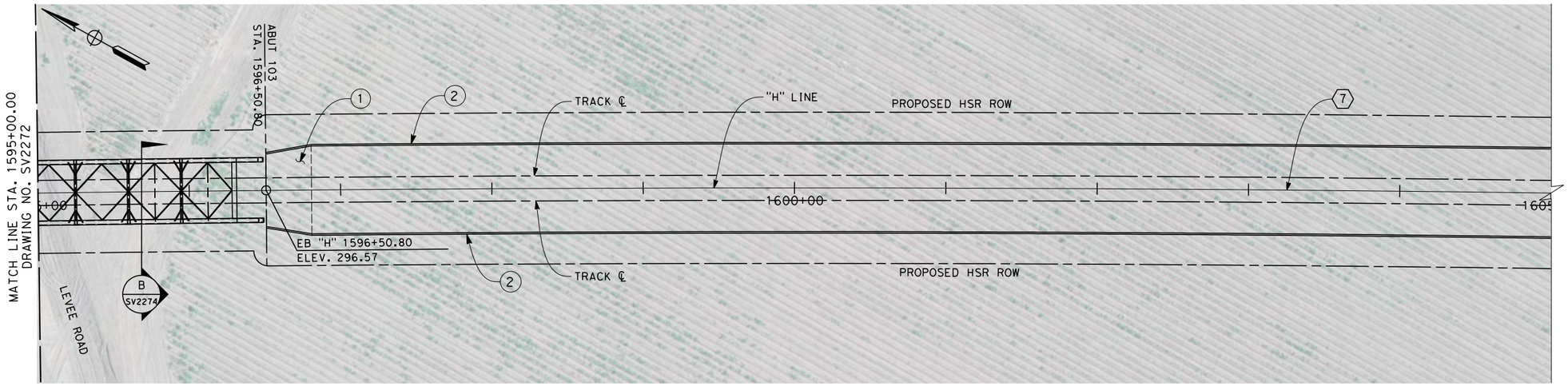
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2272
SCALE AS SHOWN
SHEET NO. 15 OF 18

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TOP OF RAIL "H" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(7)

R = 36500.00'
Δ = 58° 05' 38.8"
T = 20271.5'
L = 37008.6'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

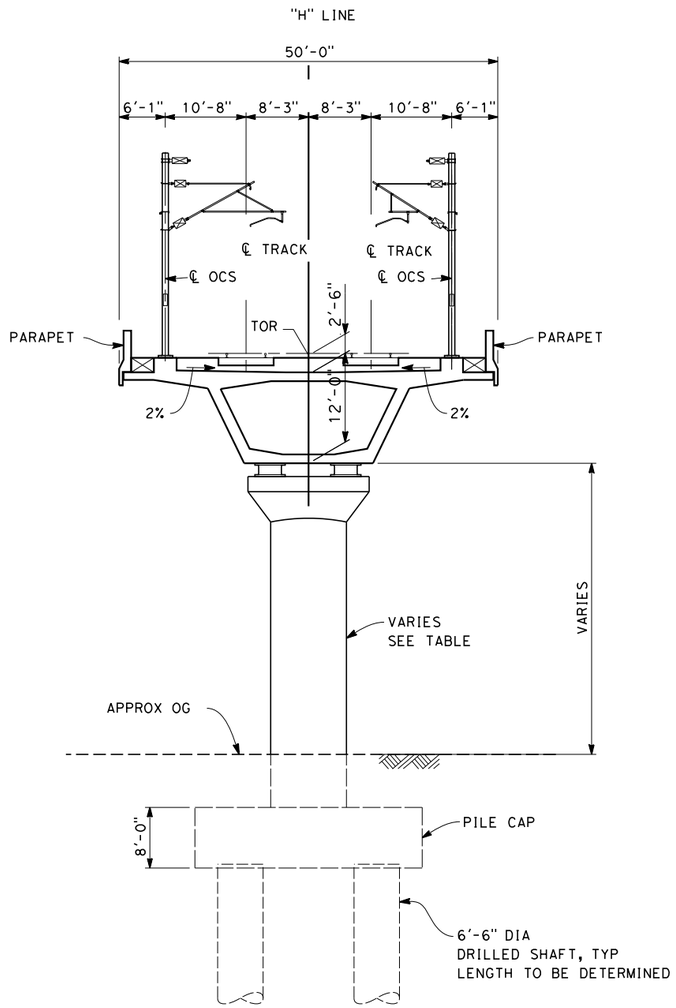
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2273
SCALE AS SHOWN
SHEET NO. 16 OF 18

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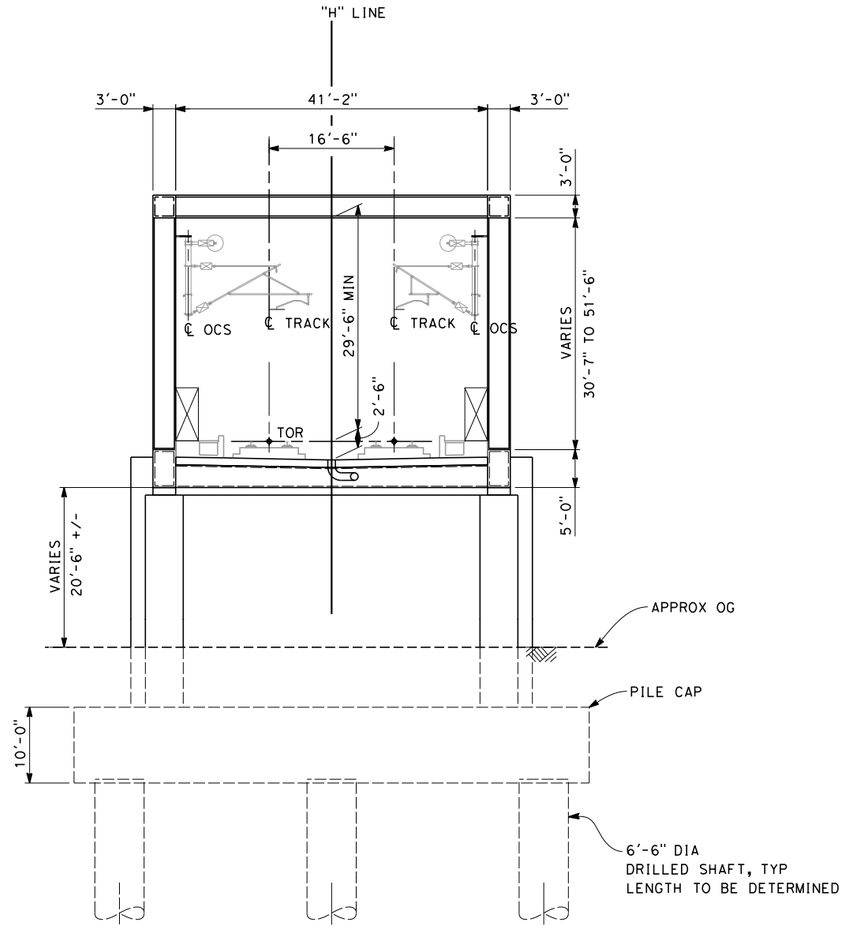
COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



SECTION A

SCALE: 1" = 10'

STA 1468+18 THROUGH 1485+70
STA 1489+27 THROUGH 1518+30
STA 1525+44 THROUGH 1580+87
STA 1587+31 THROUGH 1593+34



SECTION B

SCALE: 1" = 10'

STA 1463+48 (BENT 2)
STA 1466+96 (BENT 3)
STA 1596+52 (ABUT 90)

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

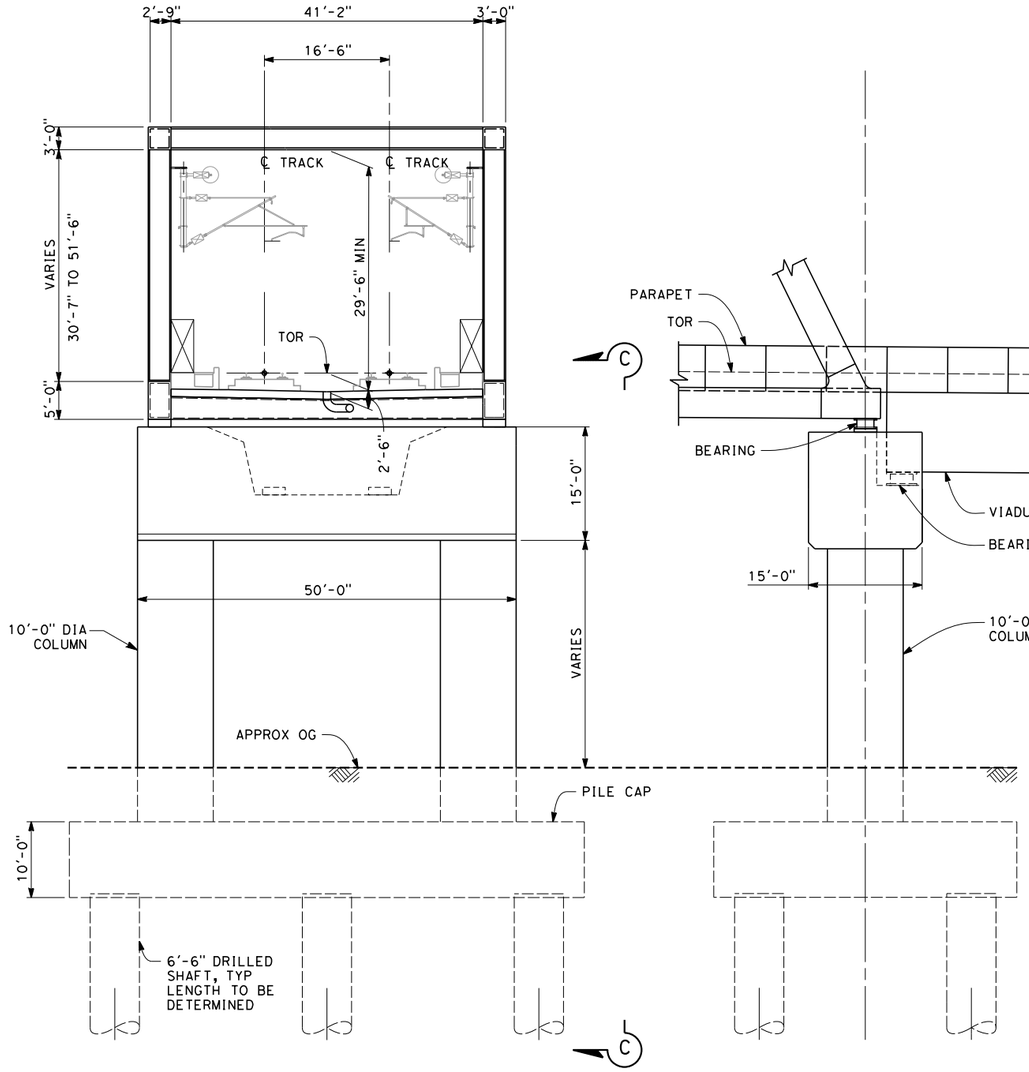
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

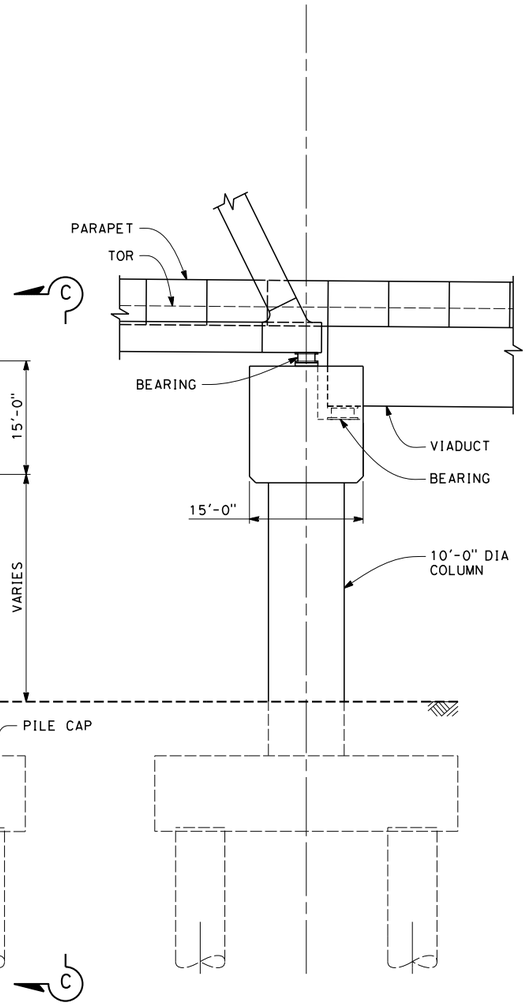
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

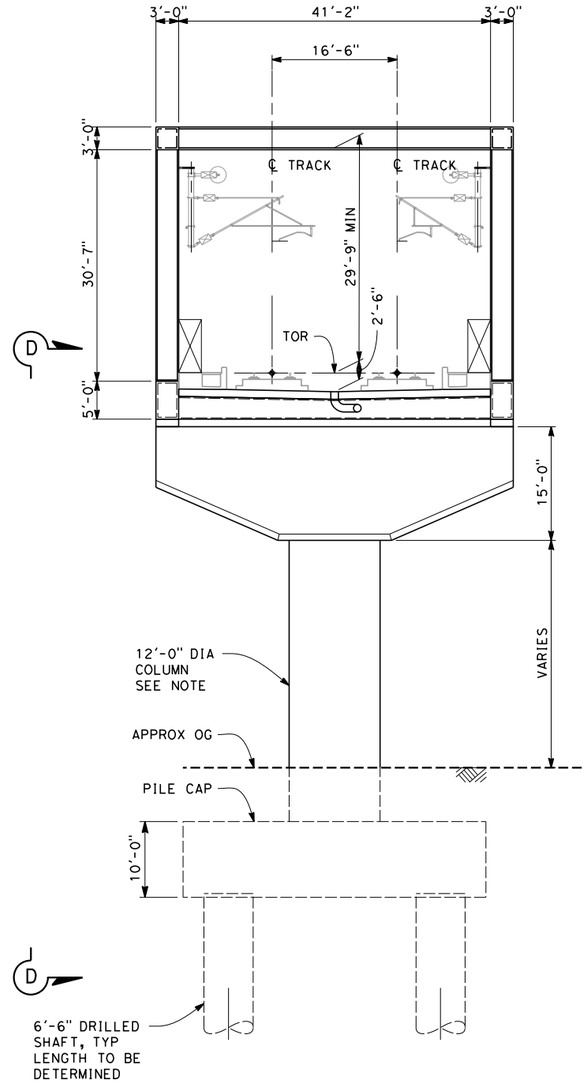
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2274
SCALE AS SHOWN
SHEET NO. 17 OF 18

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SECTION C

SCALE: 1" = 10'

STA 1485+70 THROUGH 1489+27
STA 1518+30 THROUGH 1525+44
STA 1580+97 THROUGH 1587+31
STA 1593+34 THROUGH 1596+52

SECTION C-C

SECTION D

SCALE: 1" = 10'

STA 1521+87 (BENT 33)
STA 1584+09 (BENT 83)

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
KINGS RIVER VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2275
SCALE AS SHOWN
SHEET NO. 18 OF 18

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY E. SUDHAUSEN
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

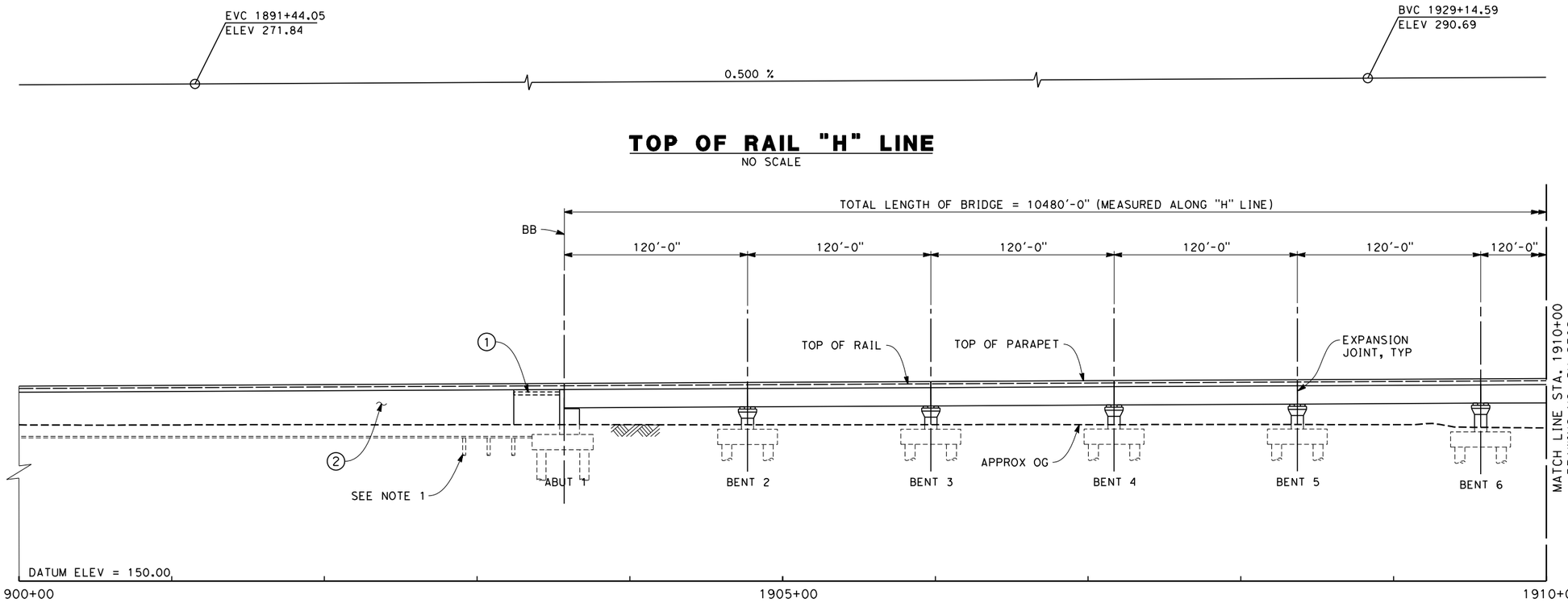
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2300
SCALE AS SHOWN
SHEET NO. 1 OF 14

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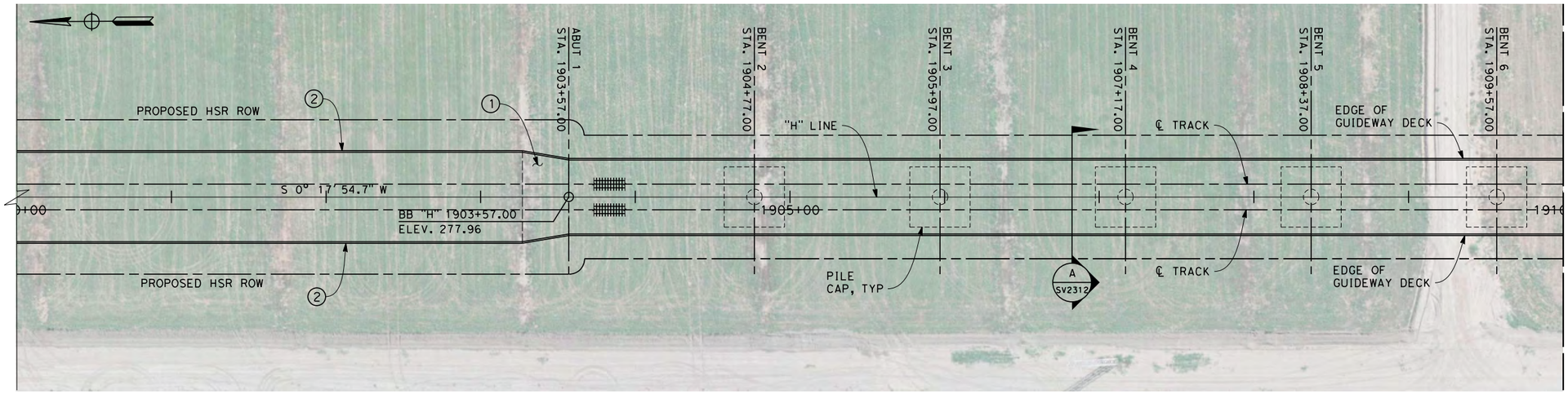


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

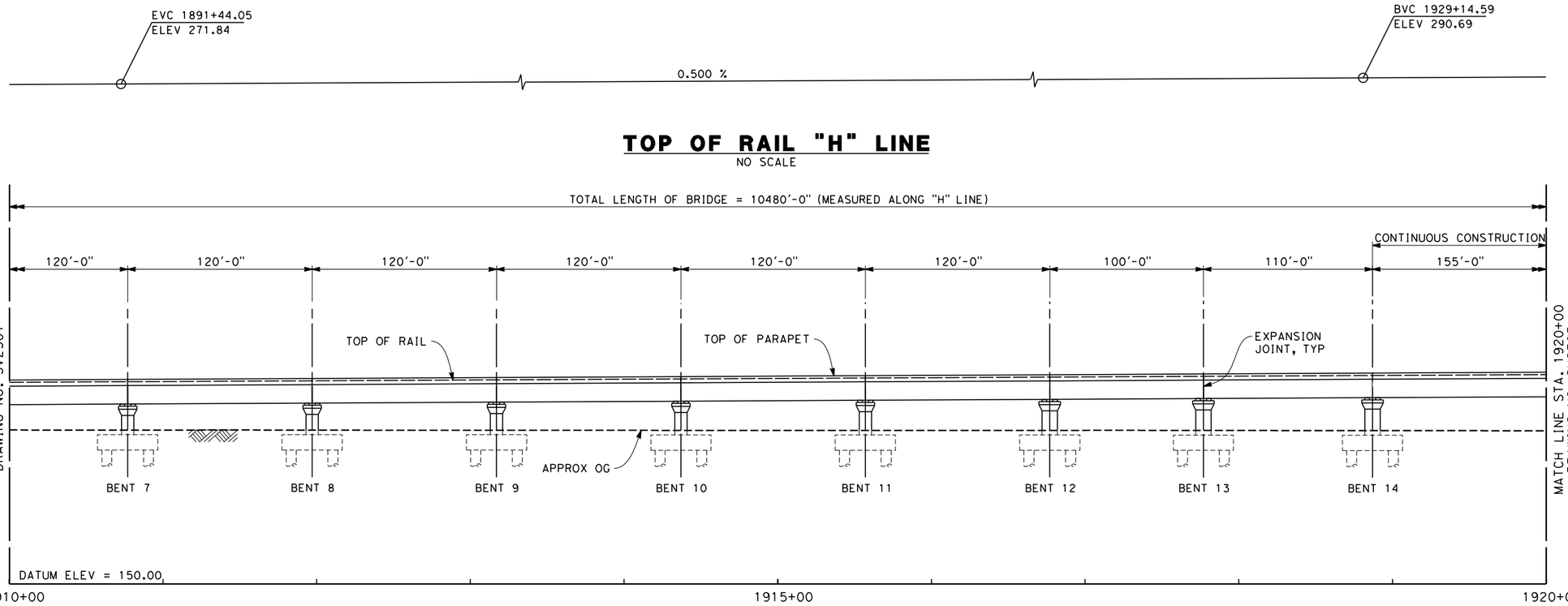
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2301
SCALE AS SHOWN
SHEET NO. 2 OF 14

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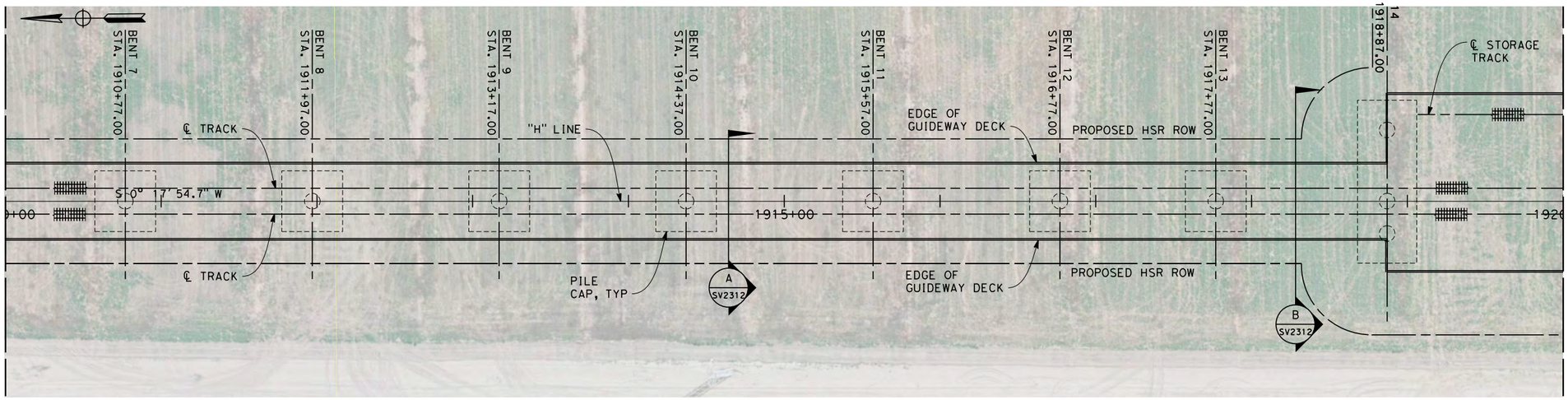


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

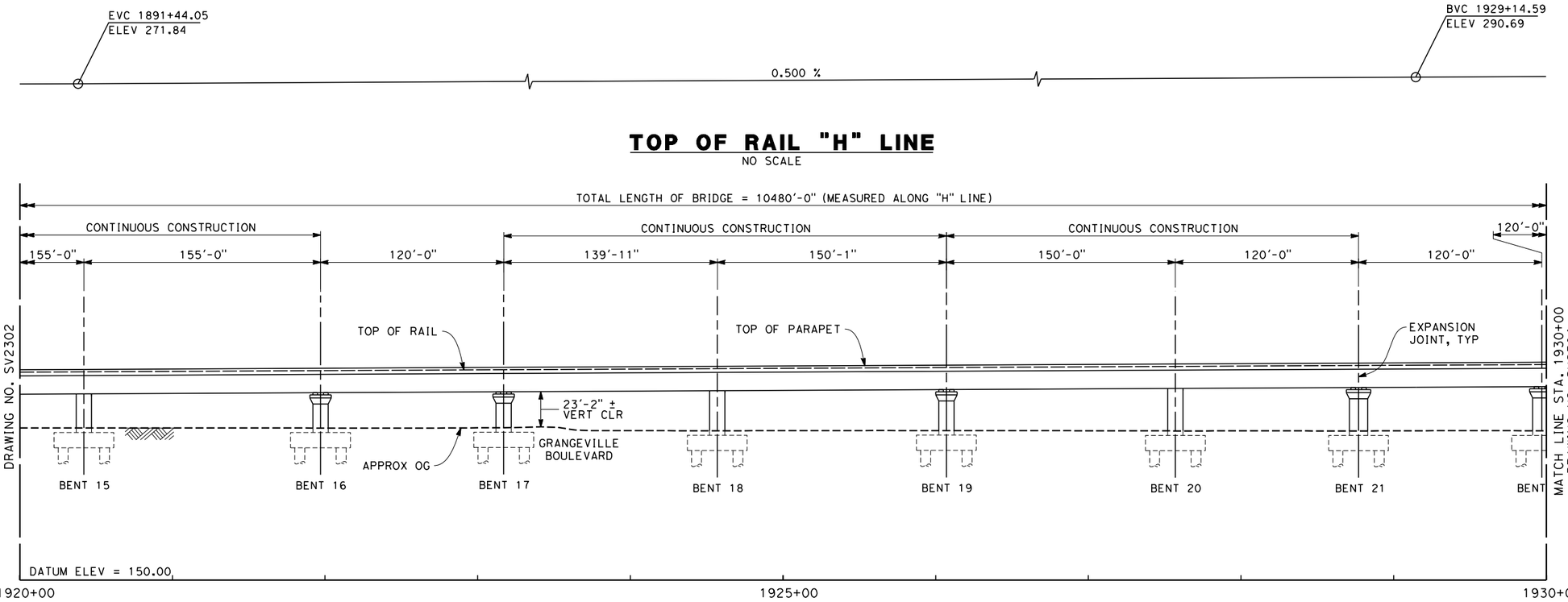
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2302
SCALE AS SHOWN
SHEET NO. 3 OF 14

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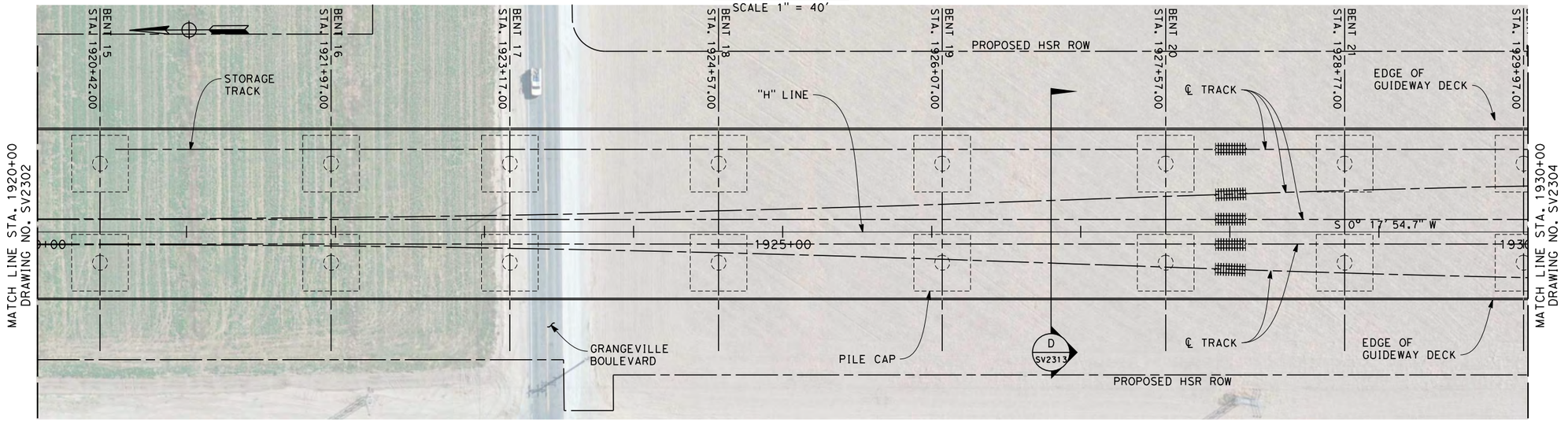


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

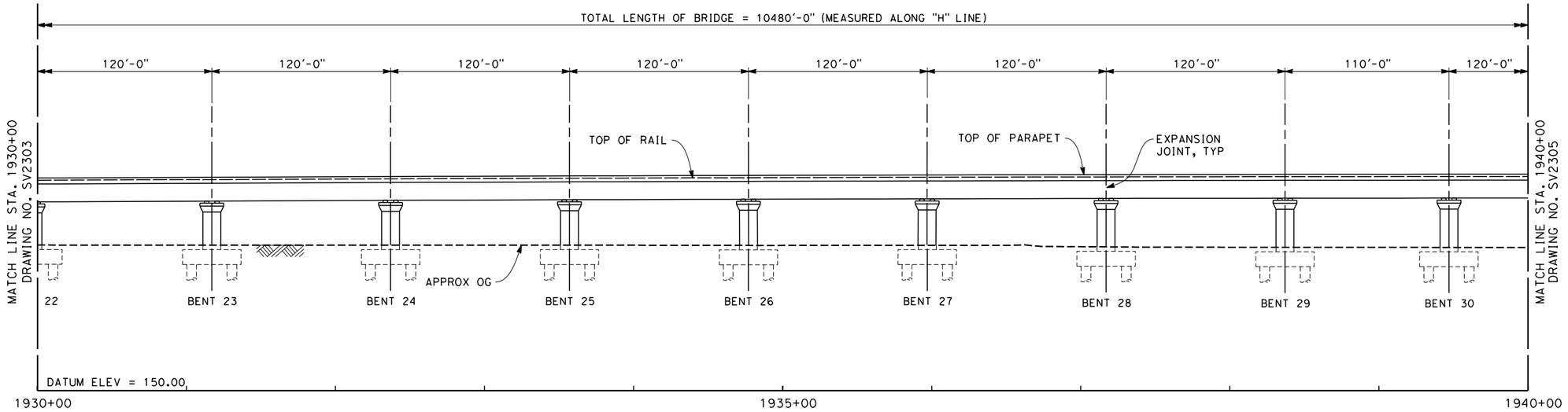
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2303
SCALE AS SHOWN
SHEET NO. 4 OF 14

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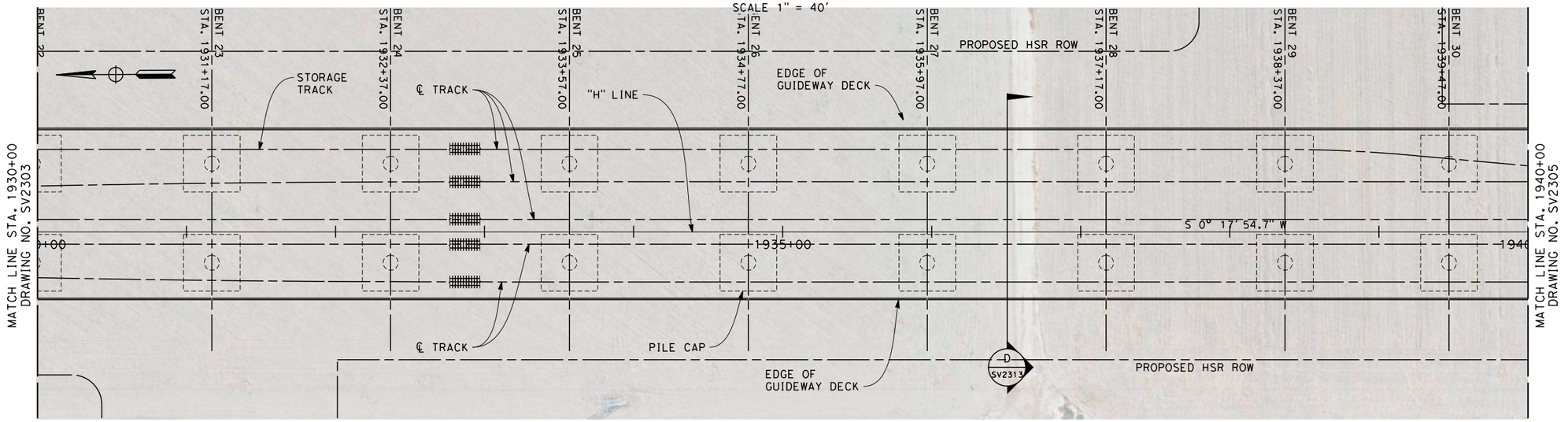
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

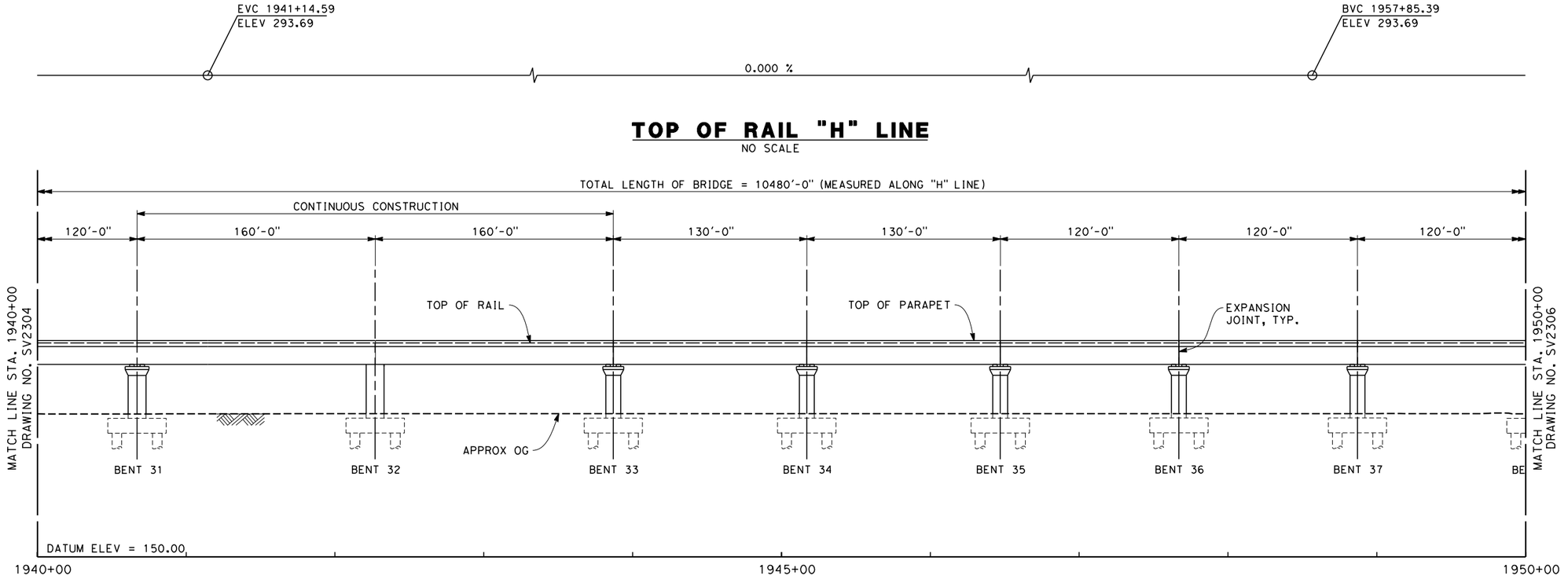
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2304
SCALE AS SHOWN
SHEET NO. 5 OF 14

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NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

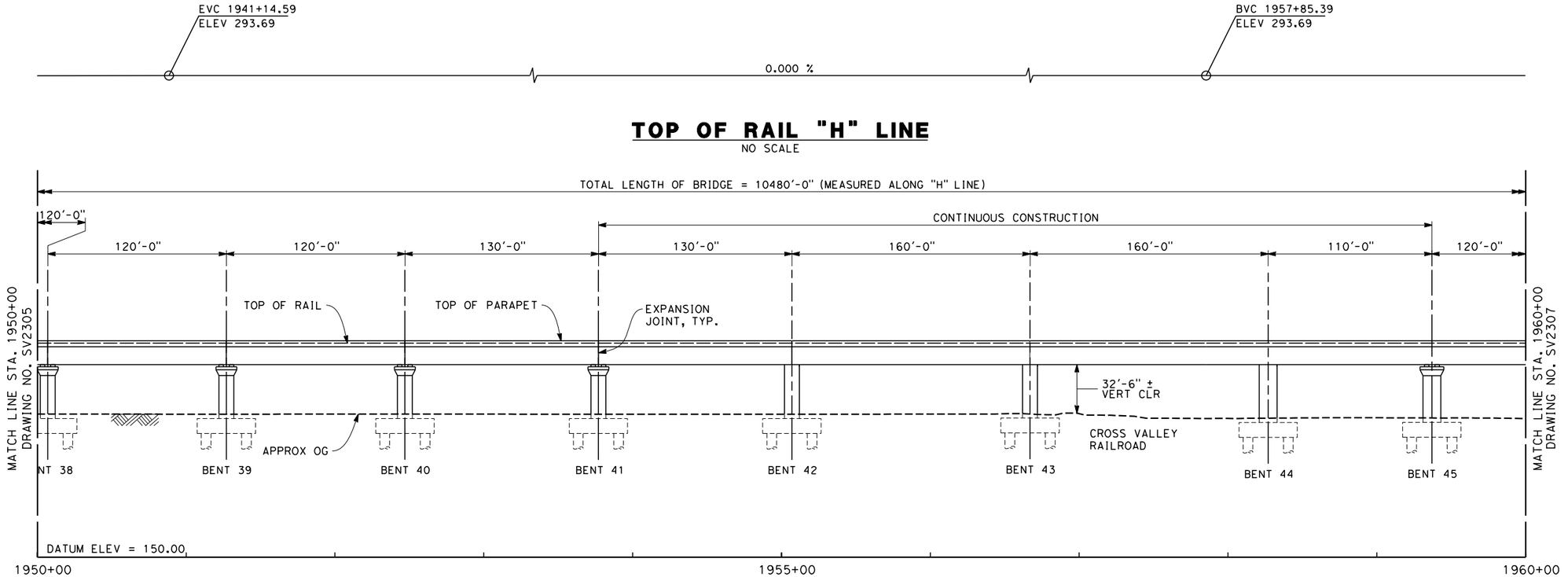
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2305
SCALE AS SHOWN
SHEET NO. 6 OF 14

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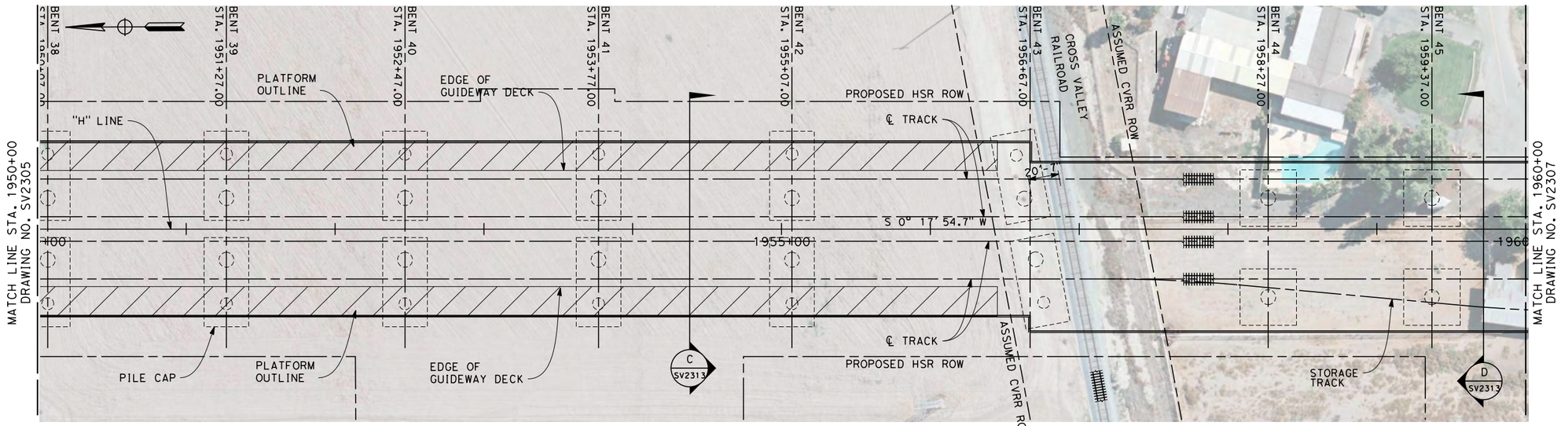


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

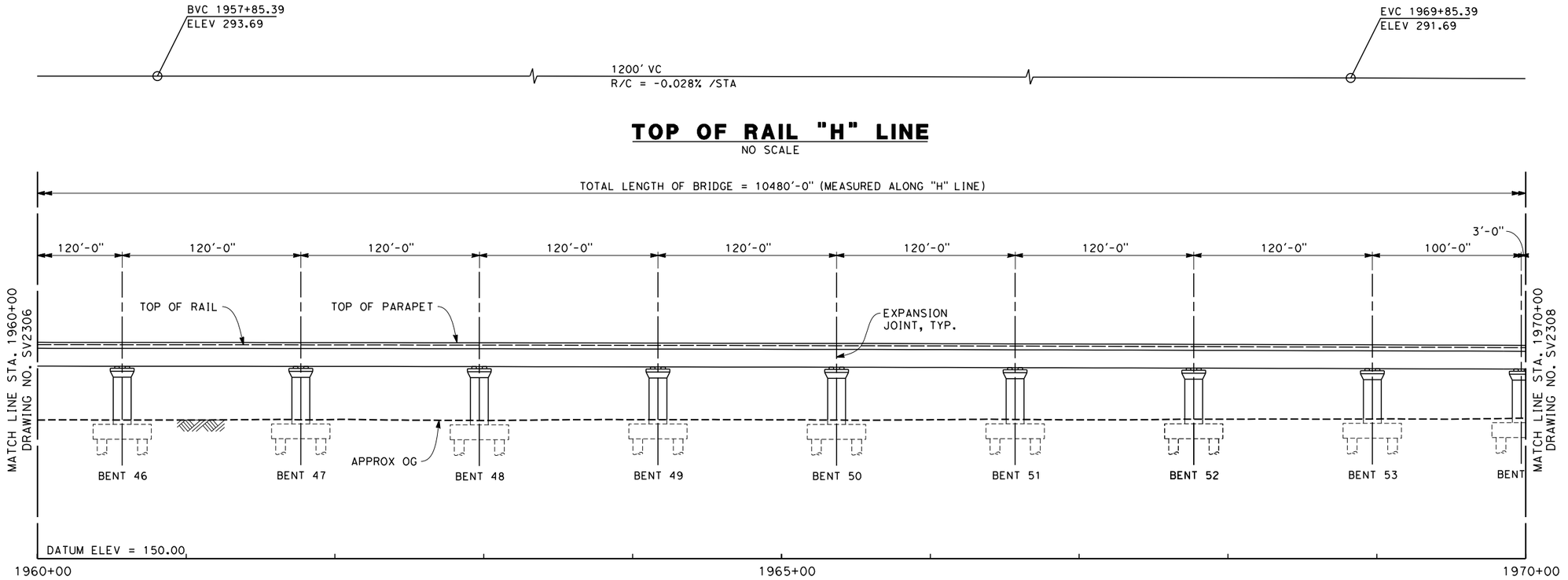
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2306
SCALE AS SHOWN
SHEET NO. 7 OF 14

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TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

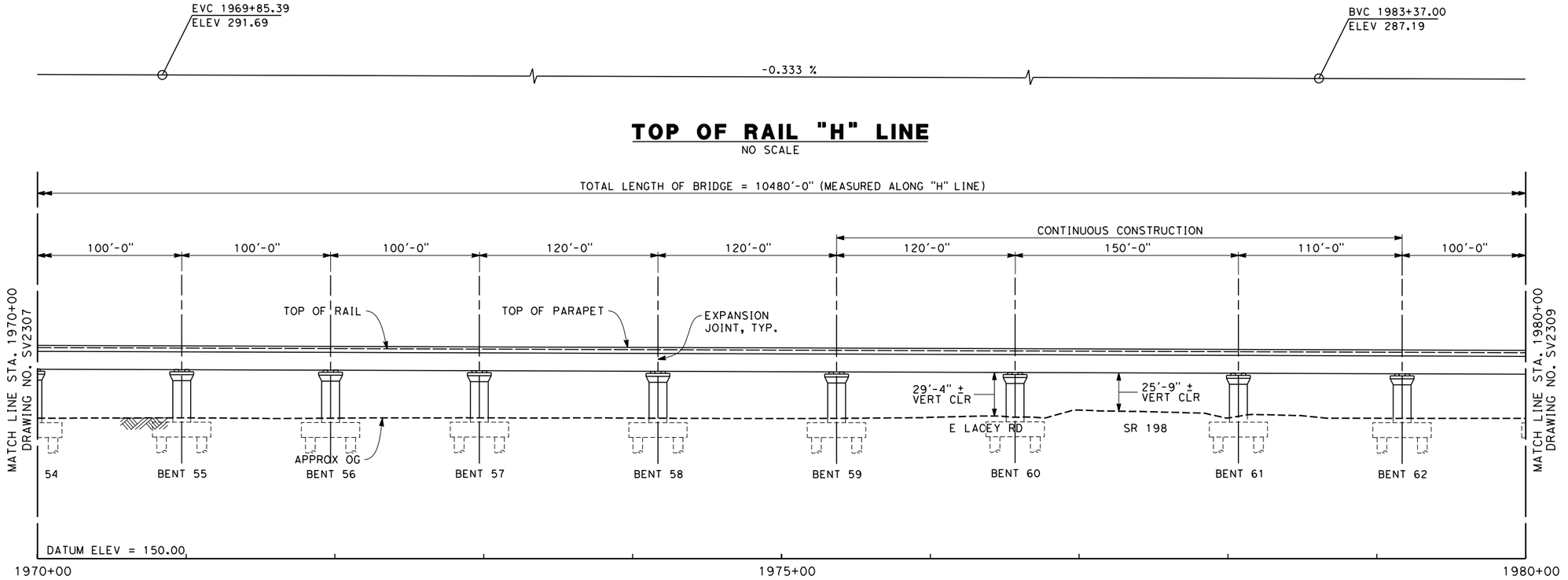
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2307
SCALE AS SHOWN
SHEET NO. 8 OF 14

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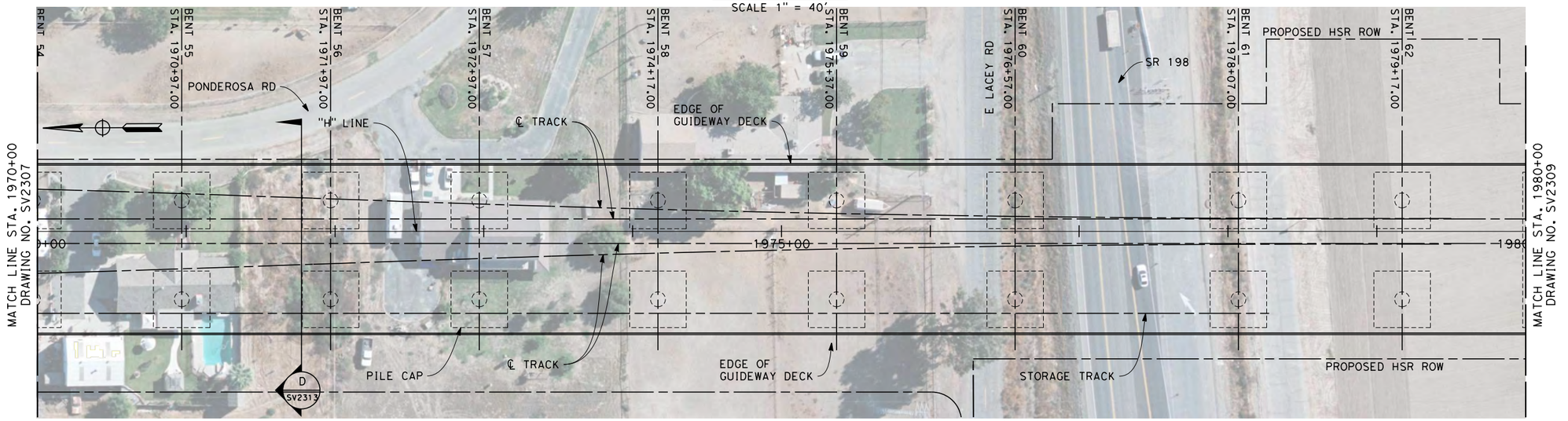


TOP OF RAIL "H" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

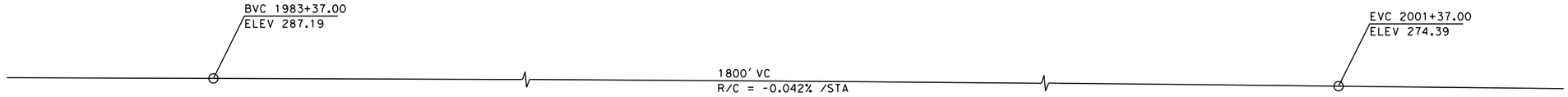
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

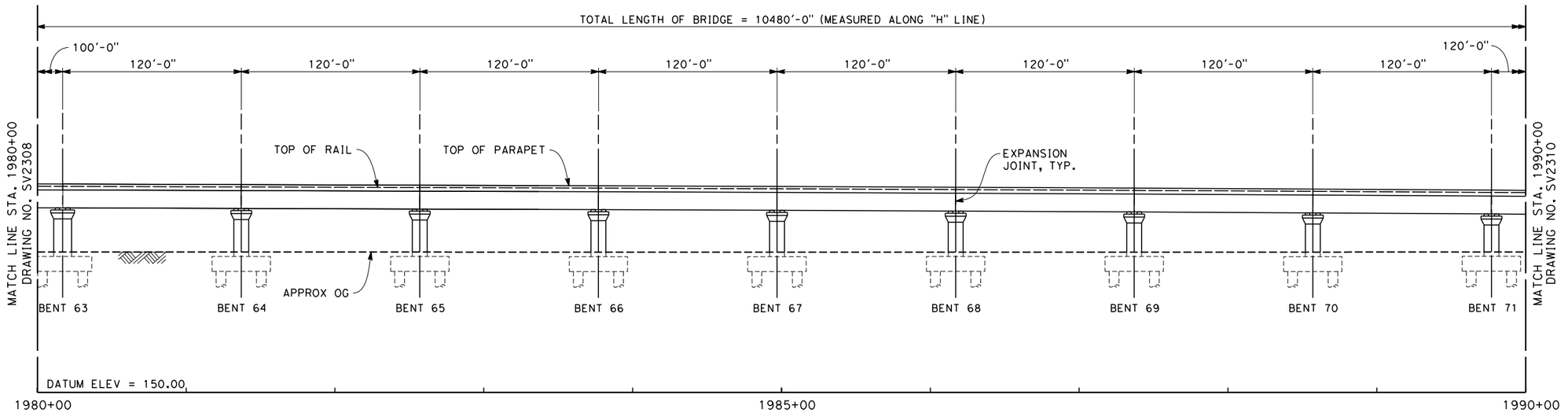
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2308
SCALE AS SHOWN
SHEET NO. 9 OF 14

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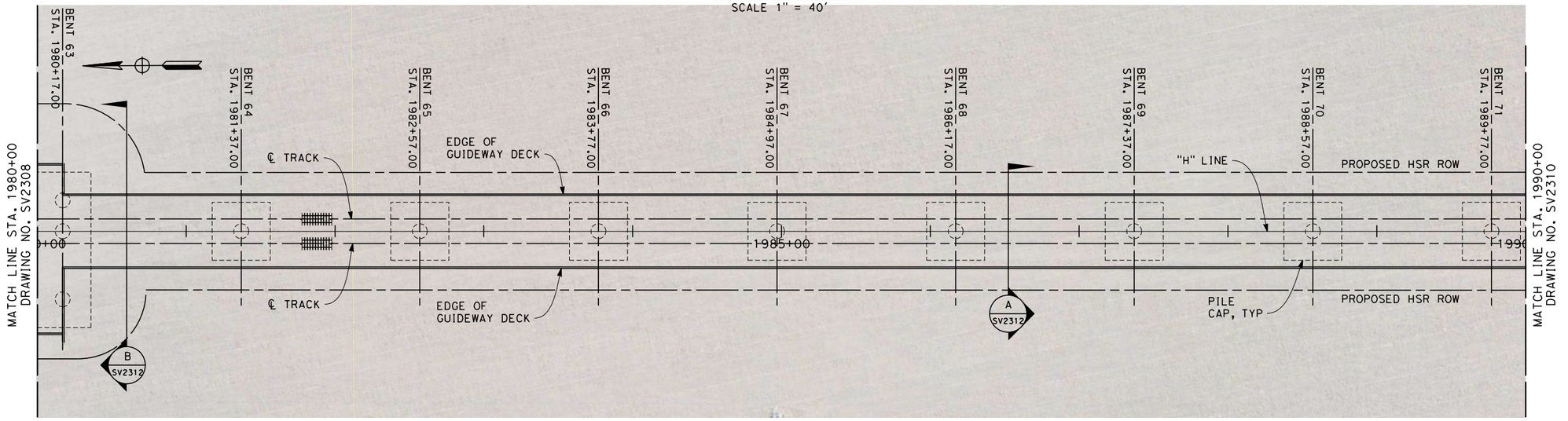
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

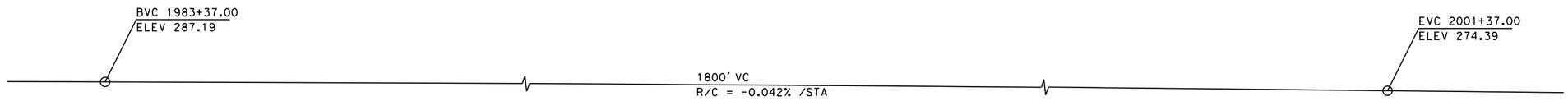
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

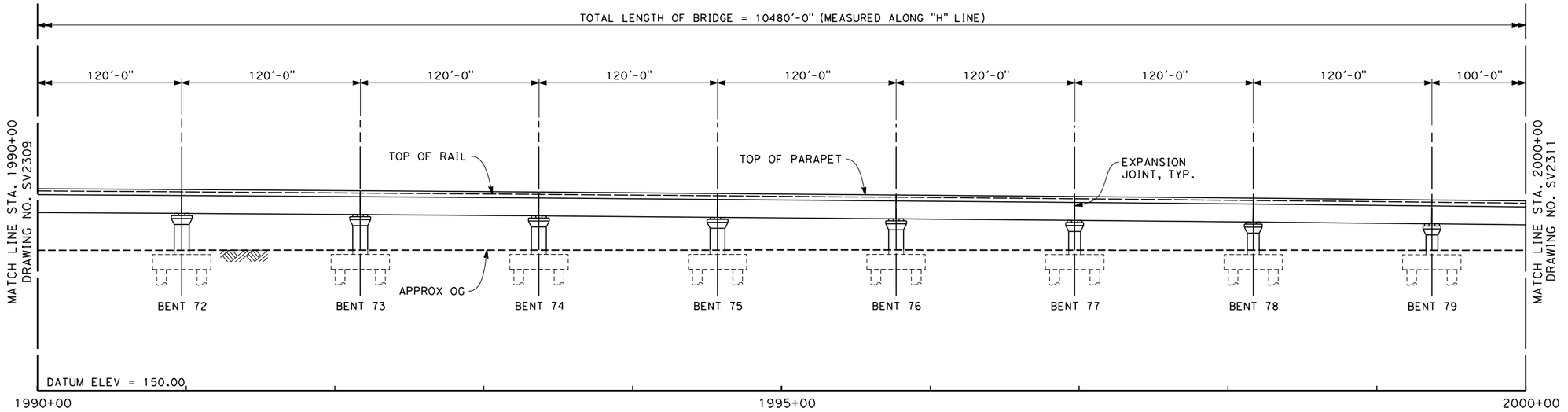
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DRAWING NO. SV2309
SCALE AS SHOWN
SHEET NO. 10 OF 14

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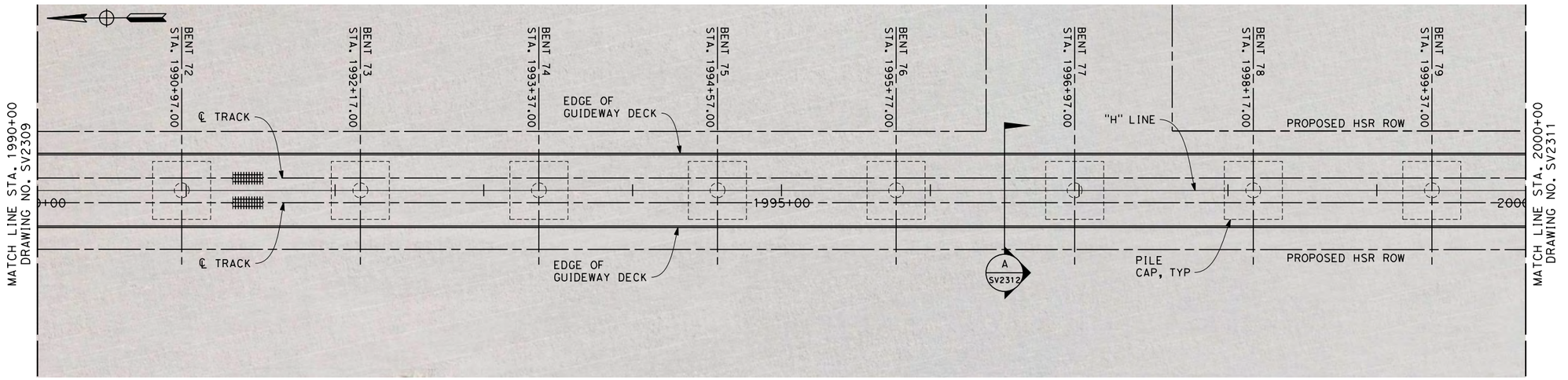
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

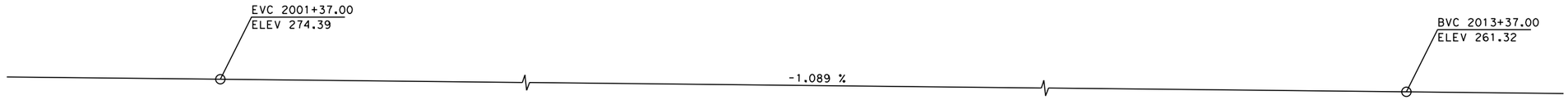
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

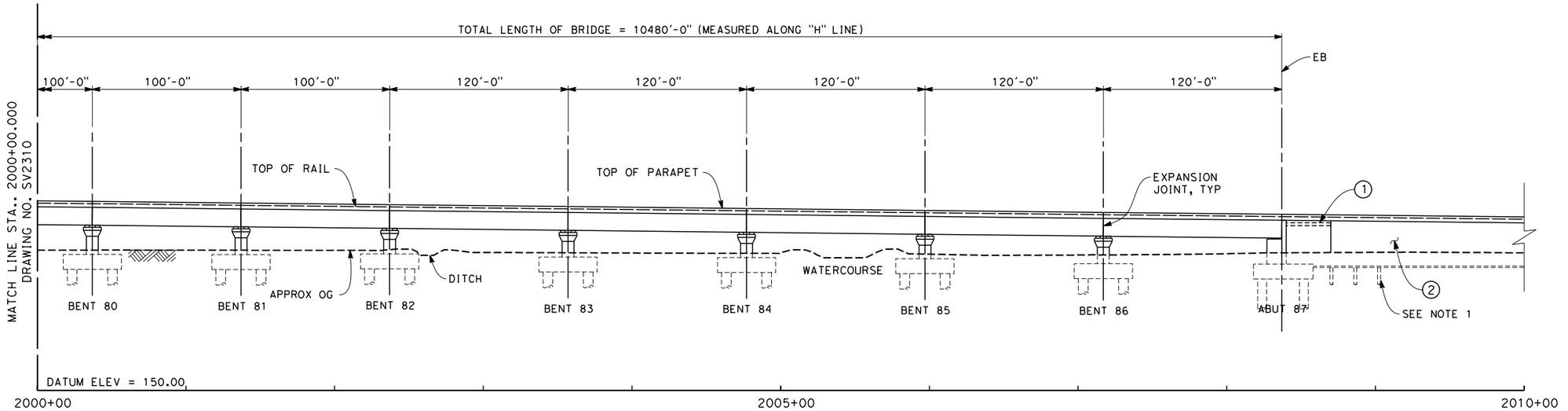
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DRAWING NO. SV2310
SCALE AS SHOWN
SHEET NO. 11 OF 14

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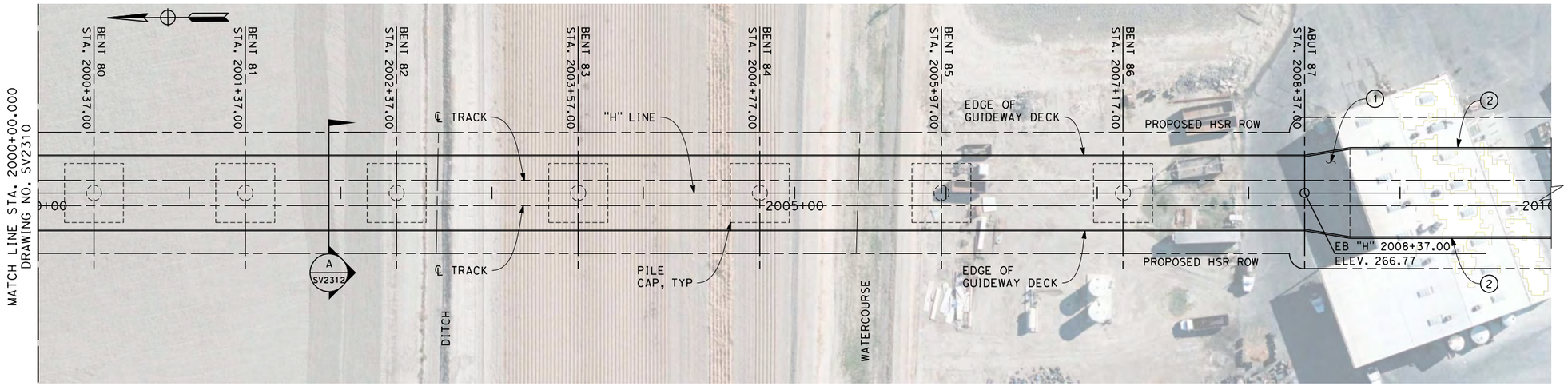
TOP OF RAIL "H" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
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LEGEND:

1. STRUCTURE APPROACH SLAB
2. RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

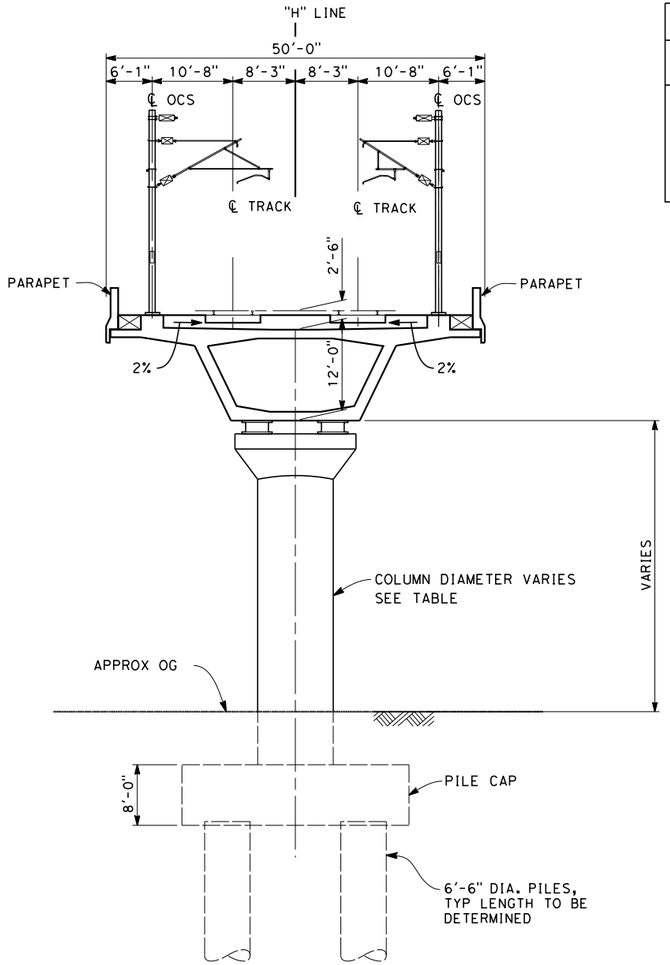
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2311
SCALE AS SHOWN
SHEET NO. 12 OF 14

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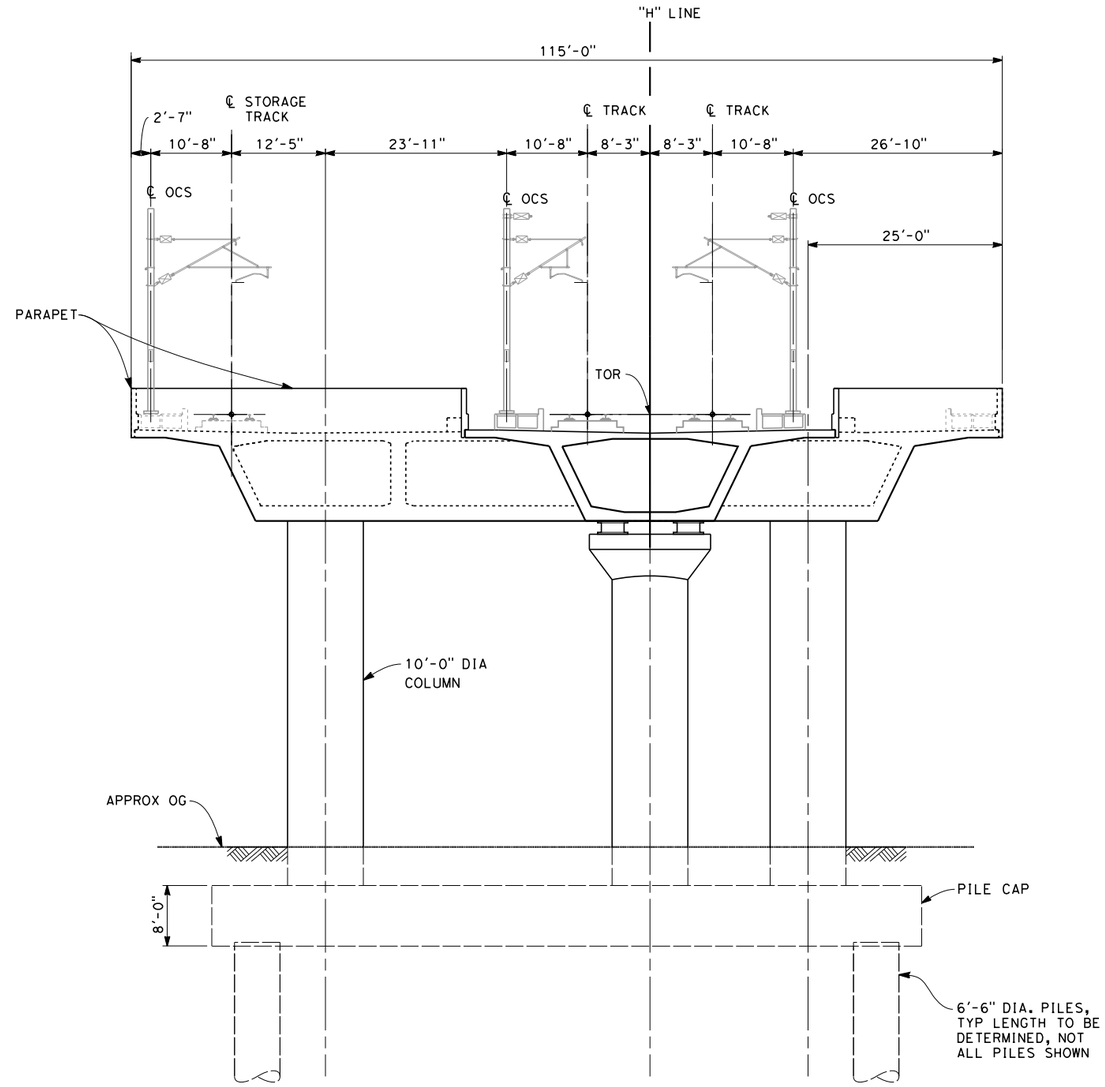


COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT

SECTION A

SCALE: 1" = 10'

STA 1903+57 THROUGH 1918+87
STA 1980+17 THROUGH 2008+37



SECTION B

SCALE: 1" = 10'

STA 1918+87 (BENT 14)
STA 1980+17 (BENT 61)

10 0 10 20
1"-10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

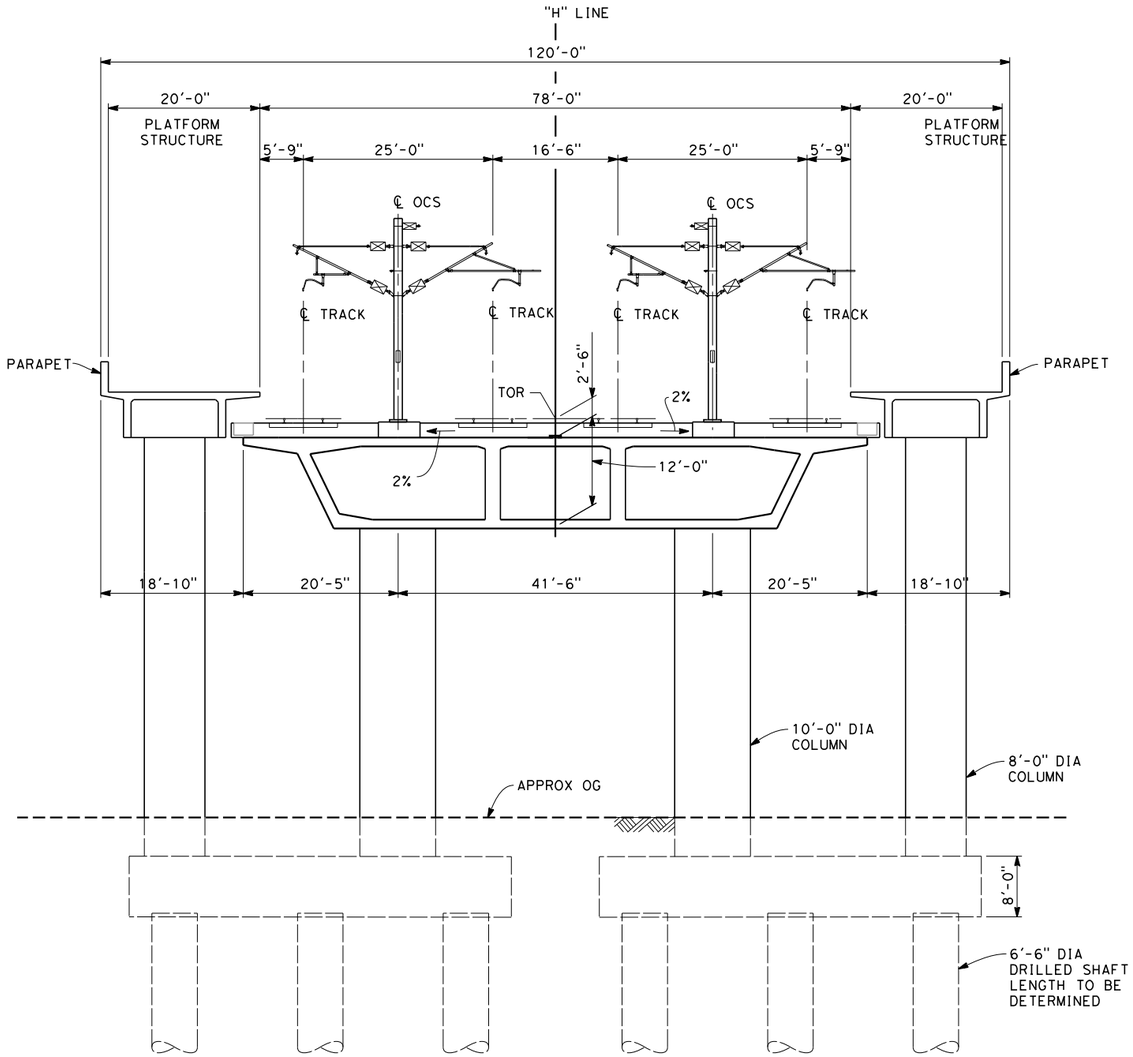
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2312
SCALE AS SHOWN
SHEET NO. 13 OF 14

04/02/2014 - RFP No.: HSR13-57

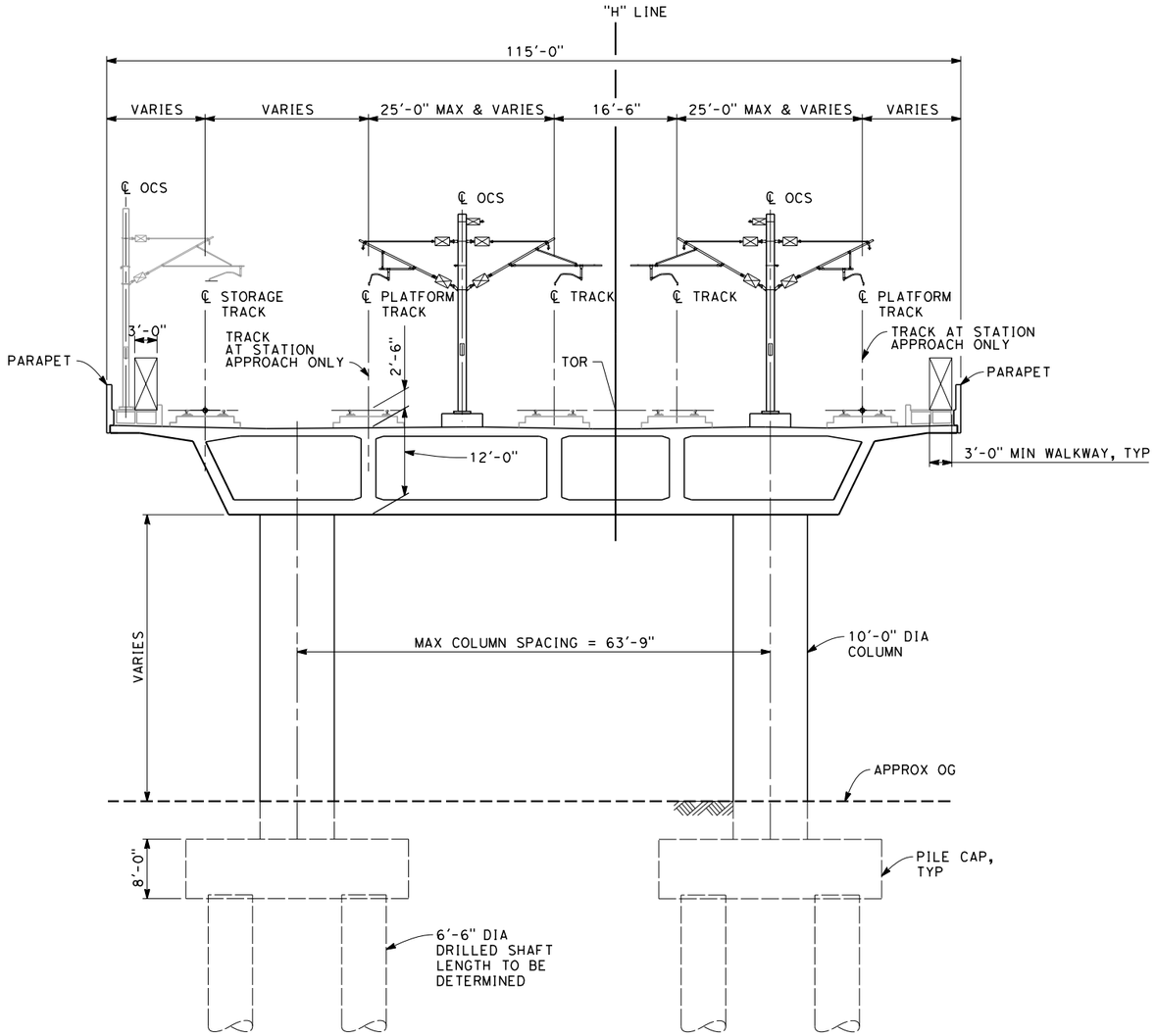
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SECTION C

SCALE: 1" = 10'

STA 1942+27 THROUGH 1956+67



SECTION D

SCALE: 1" = 10'

STA 1918+87 THROUGH 1942+27
STA 1956+67 THROUGH 1980+17

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY M. LAMAGNA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

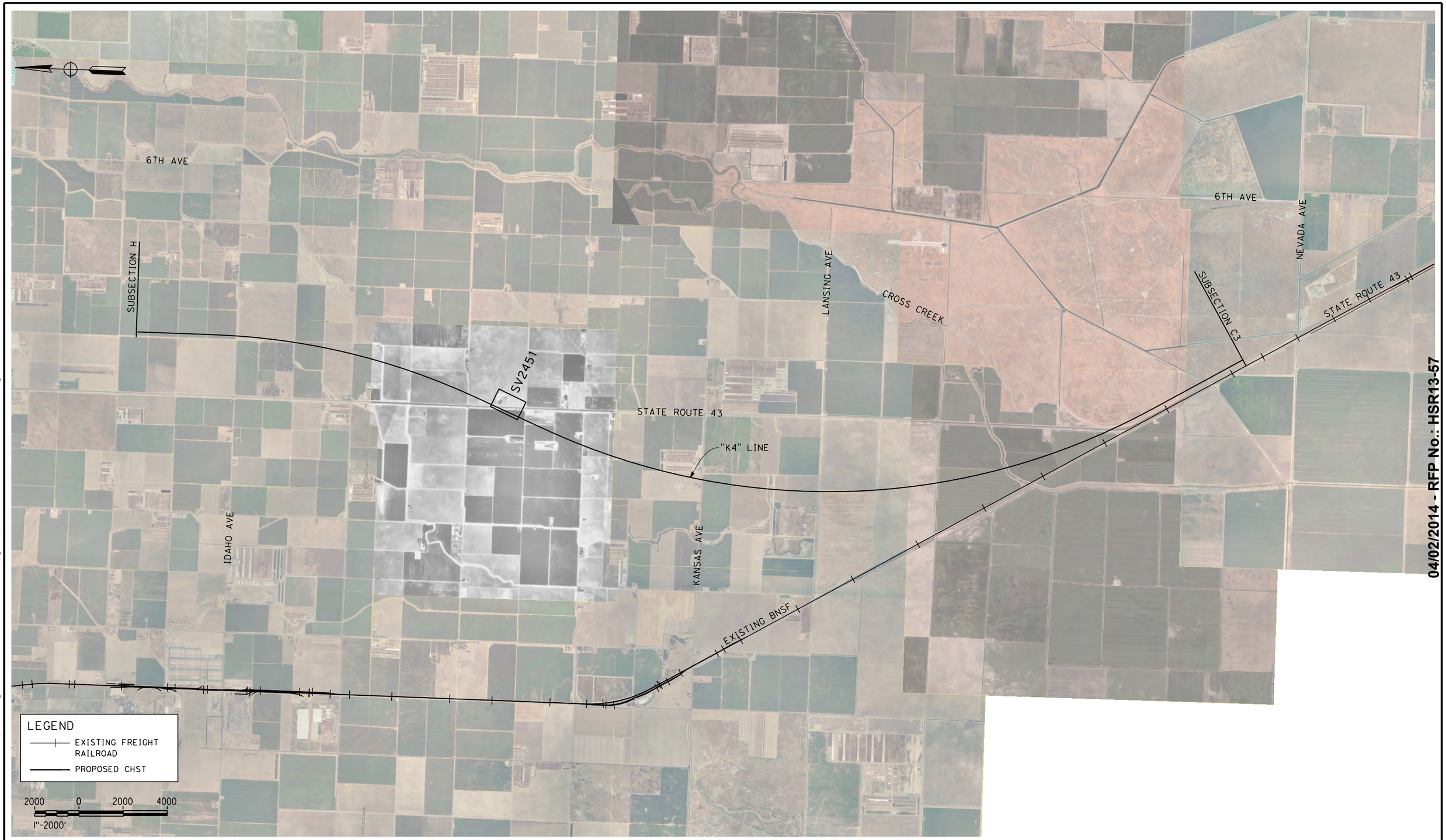
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
HANFORD VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2313
SCALE AS SHOWN
SHEET NO. 14 OF 14

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY E. SUDHAUSEN
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

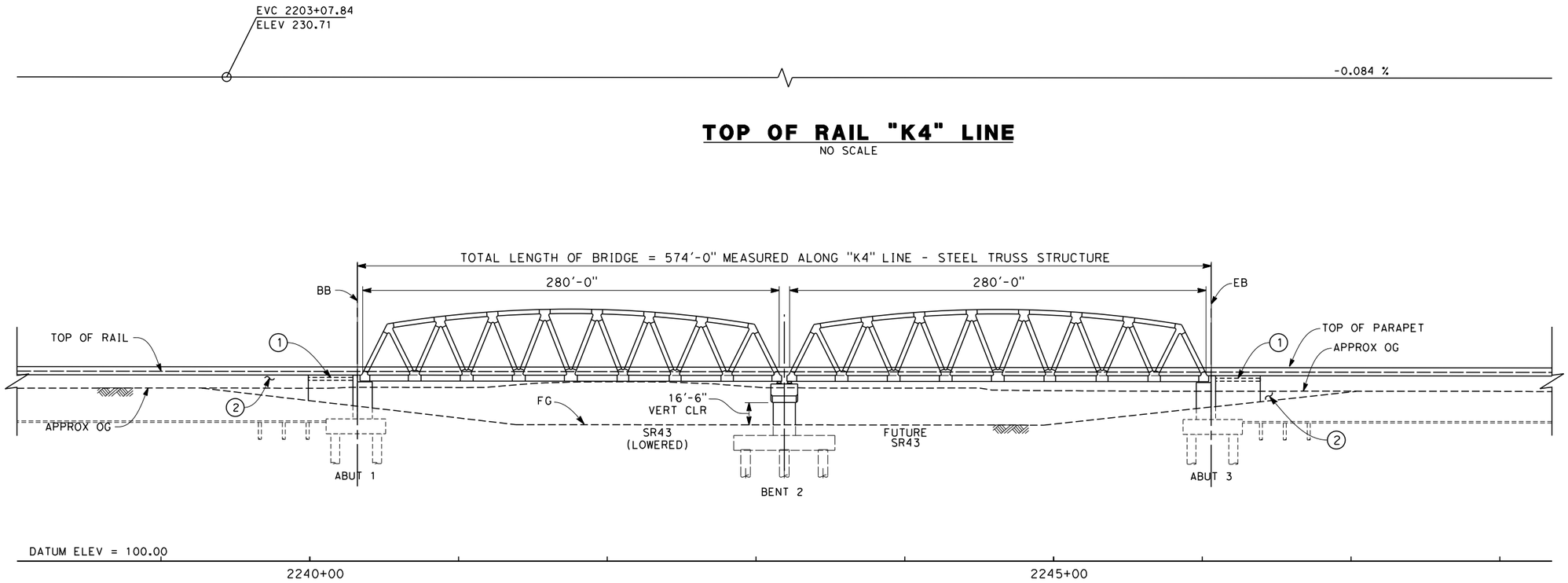
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STATE ROUTE 43 UNDERPASS
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2450
SCALE AS SHOWN
SHEET NO. 1 OF 3

04/02/2014 - RFP No.: HSR13-57

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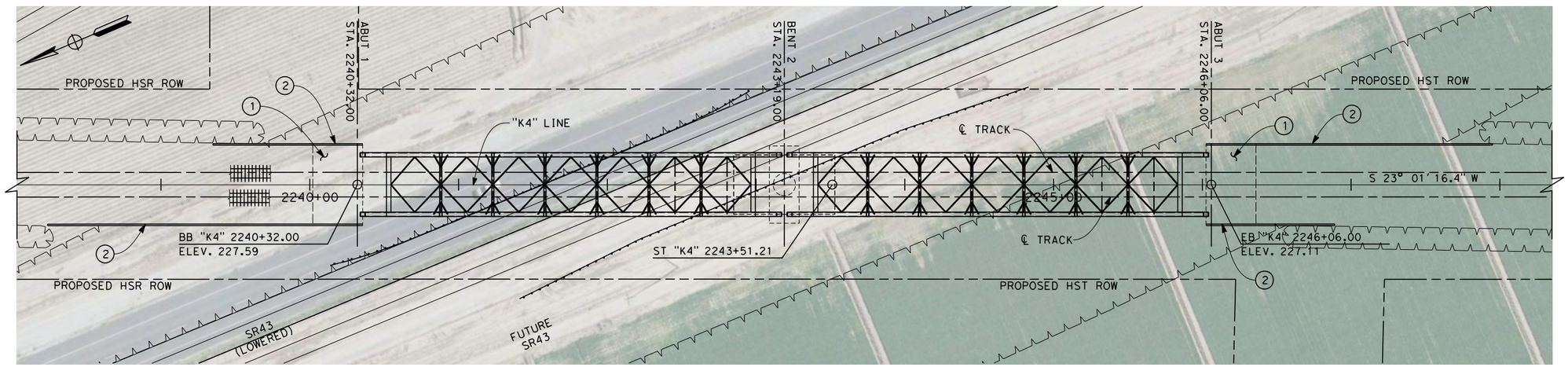


TOP OF RAIL "K4" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S.T. MAK
DRAWN BY J. VALENZUELA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

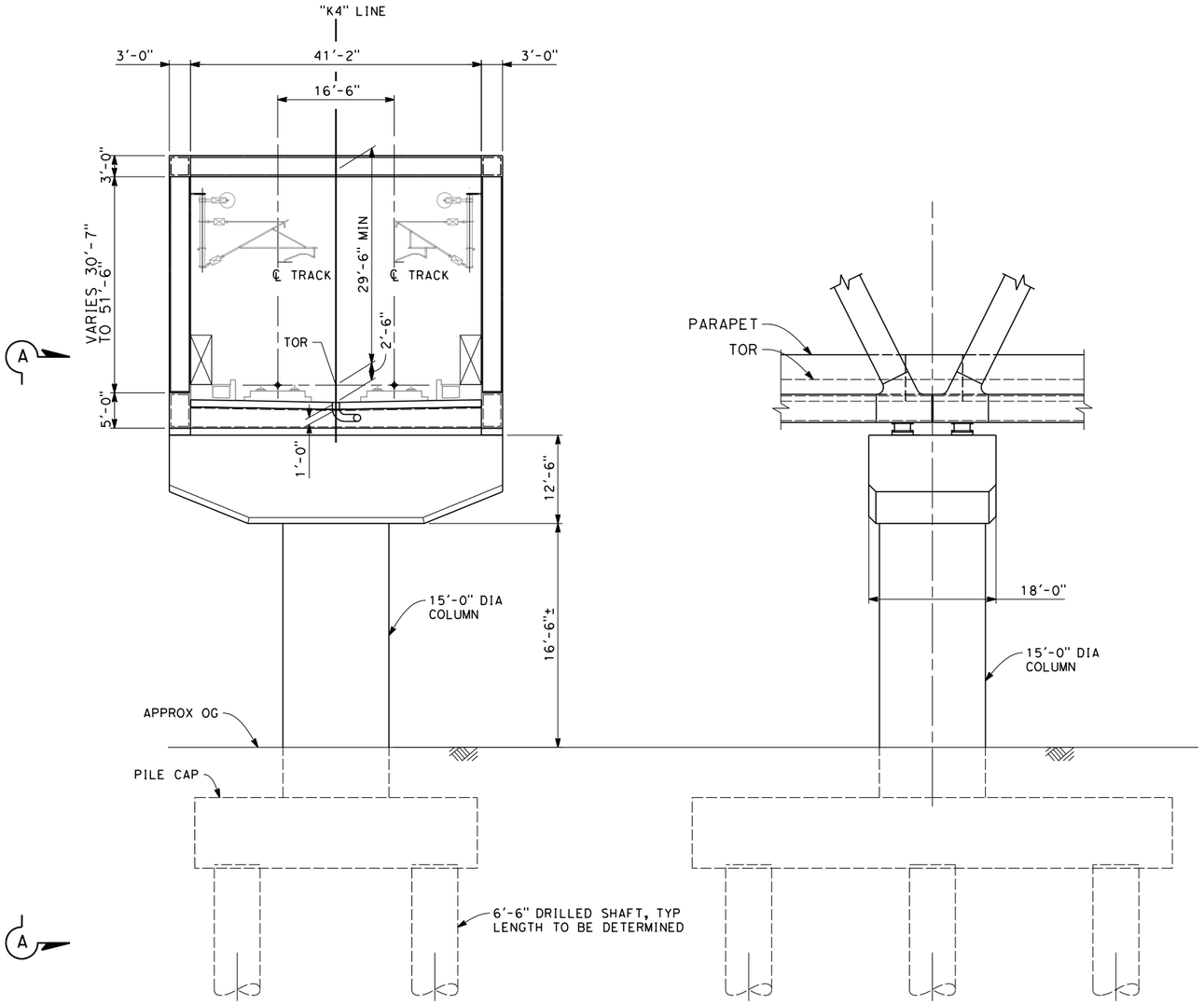
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STATE ROUTE 43 UNDERPASS
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2451
SCALE AS SHOWN
SHEET NO. 2 OF 3

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SECTION A
SCALE: 1" = 10'

SECTION A-A
SCALE: 1" = 10'

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY D. ORIZA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
STATE ROUTE 43 UNDERPASS
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2452
SCALE AS SHOWN
SHEET NO. 3 OF 3

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY E. SUDHAUSEN
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

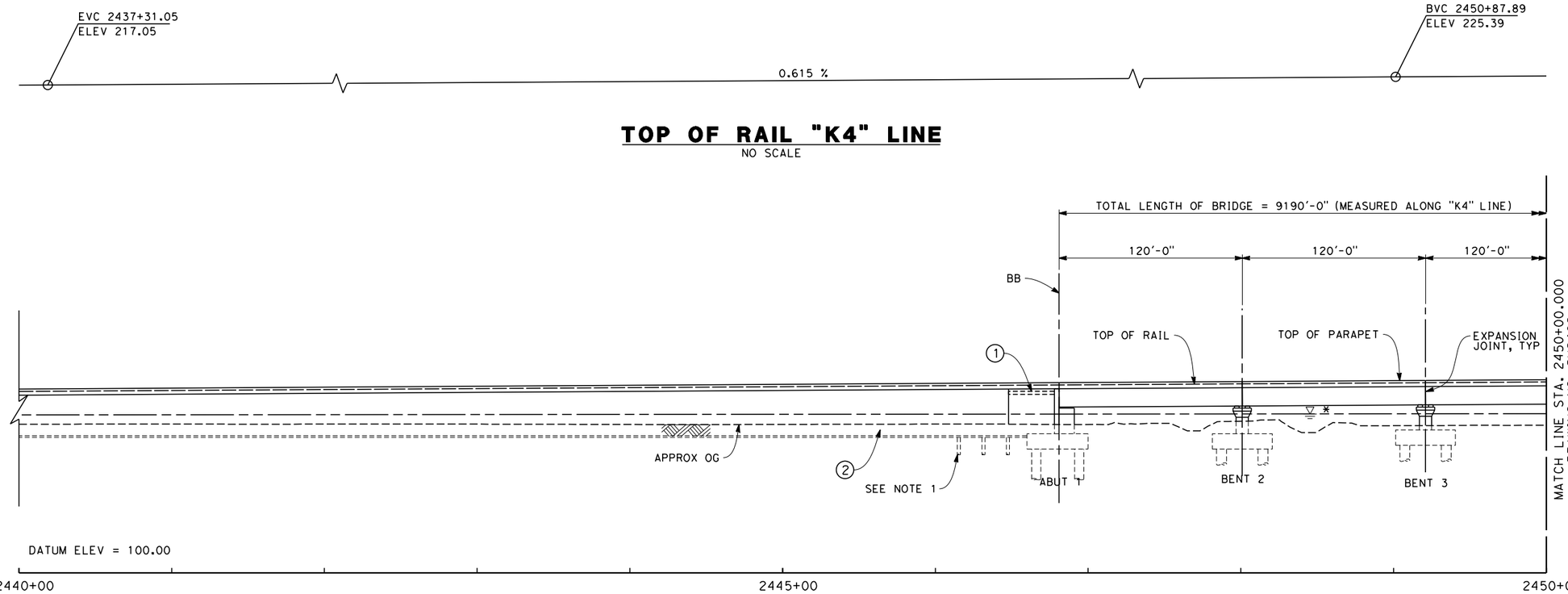
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
KEY MAP

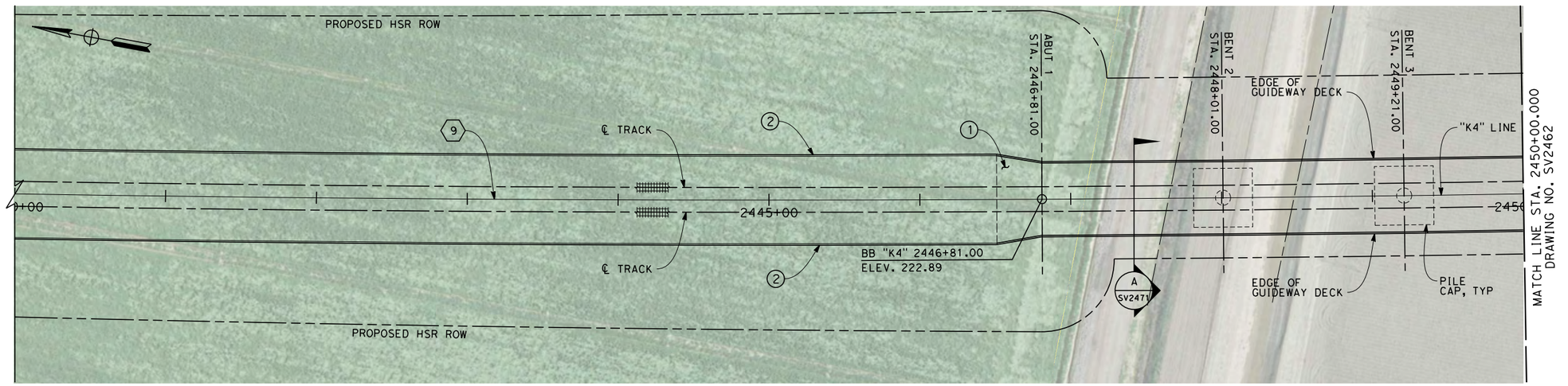
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2460
SCALE AS SHOWN
SHEET NO. 1 OF 13

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TOP OF RAIL "K4" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

9

R = 30500.00'
Δ = 49° 01' 18.3"
T = 13906.6'
L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

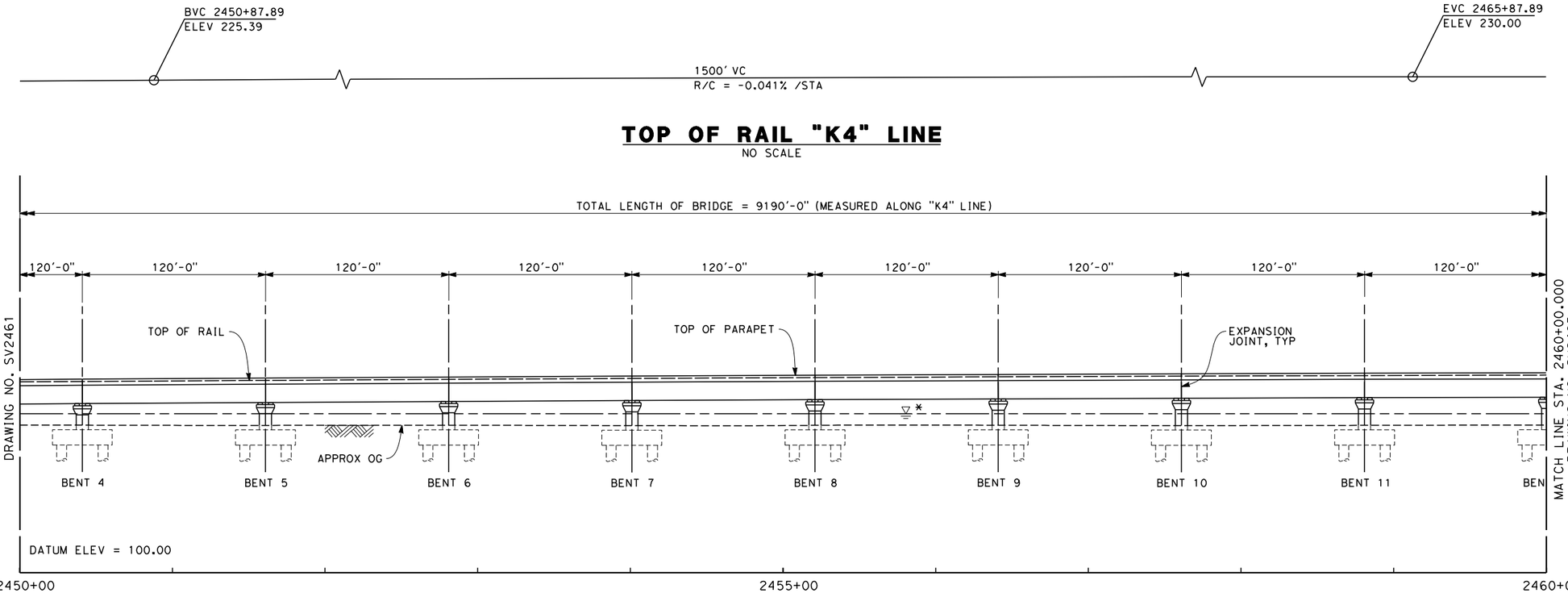
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

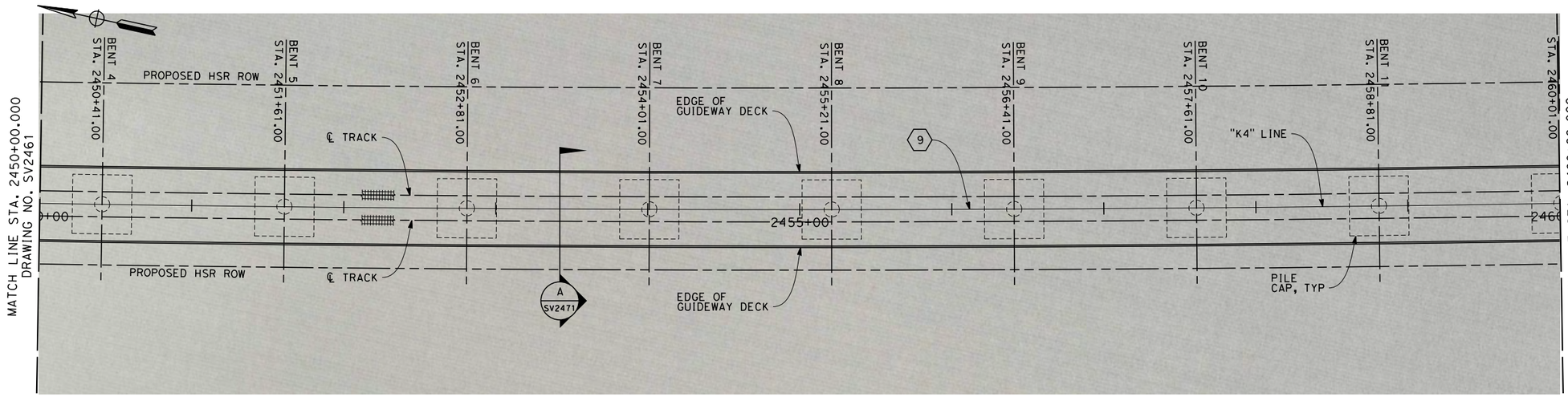
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2461
SCALE AS SHOWN
SHEET NO. 2 OF 13

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TOP OF RAIL "K4" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

9

R = 30500.00'
Δ = 49° 01' 18.3"
T = 13906.6'
L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F.PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

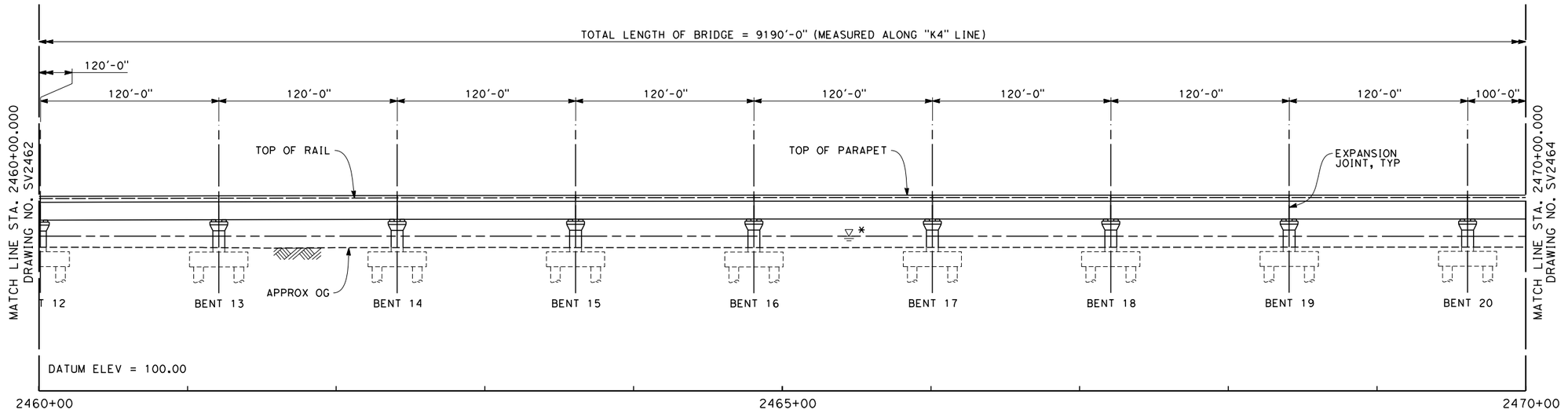
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2462
SCALE AS SHOWN
SHEET NO. 3 OF 13

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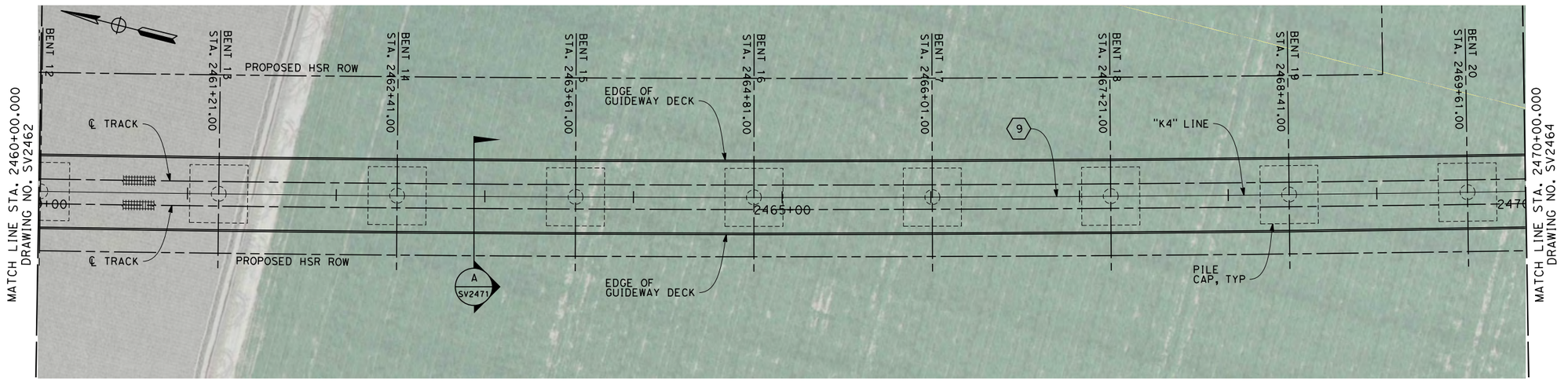
TOP OF RAIL "K4" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   - SIMPLE SPANS - MSS OR FLPM
   - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   - STEEL TRUSS - INSITU, SLID OR LAUNCHED
   - ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'

Δ = 49° 01' 18.3"

T = 13906.6'

L = 26095.5'

40 0 40 80

1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

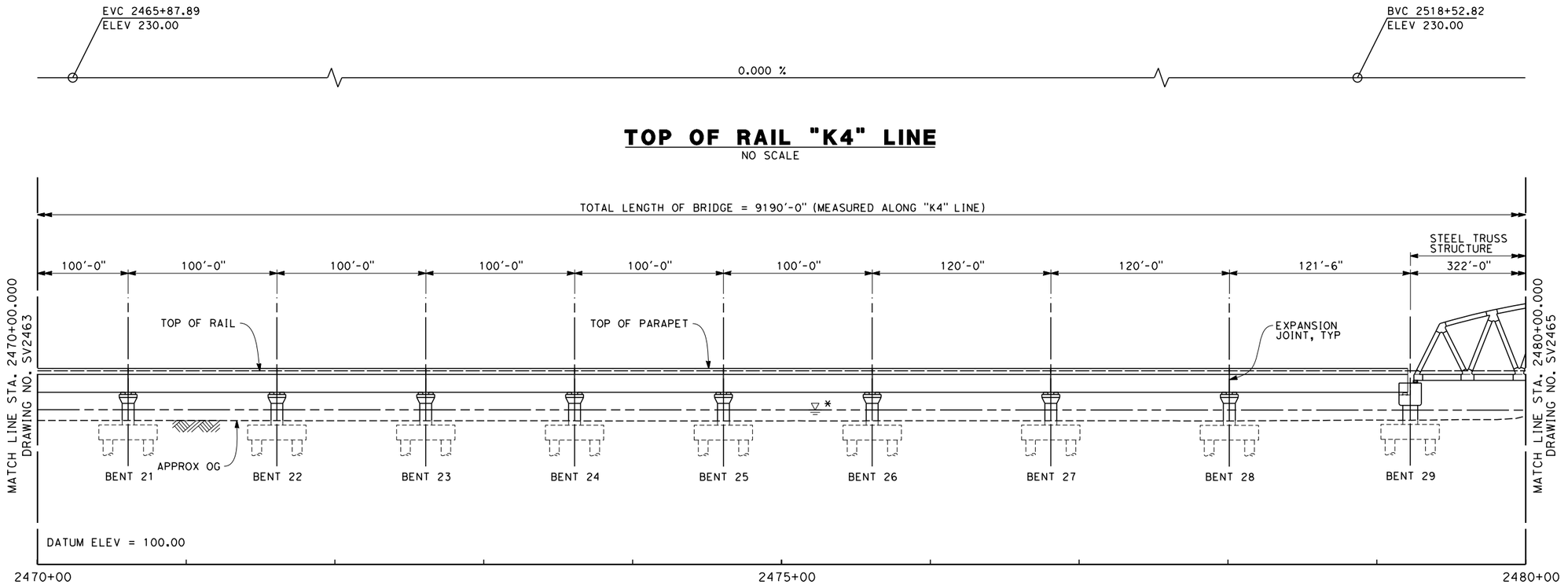
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2463
SCALE AS SHOWN
SHEET NO. 4 OF 13

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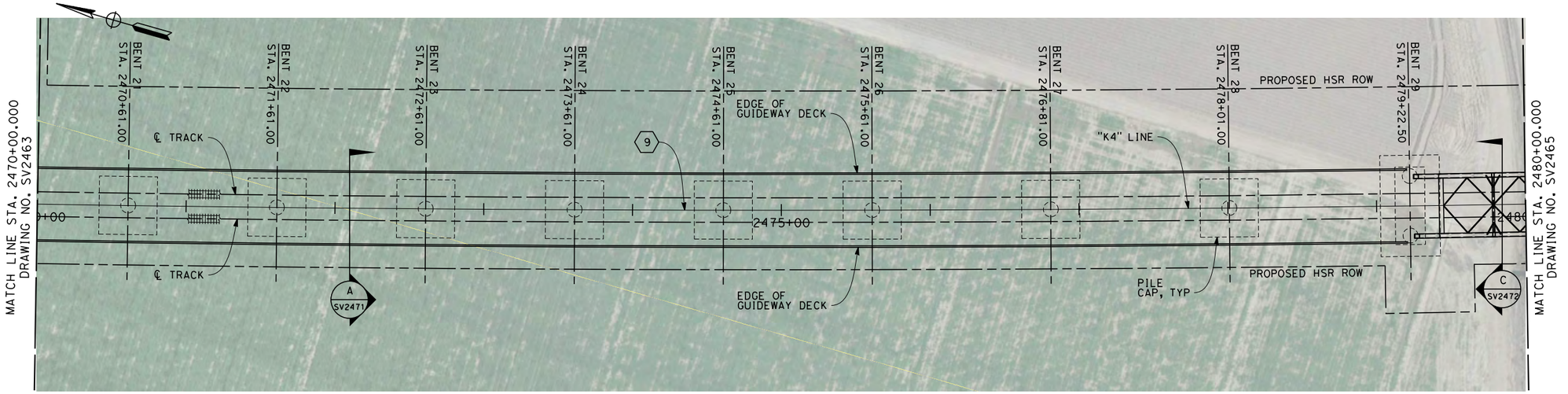


TOP OF RAIL "K4" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'

Δ = 49° 01' 18.3"

T = 13906.6'

L = 26095.5'

40 0 40 80

1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

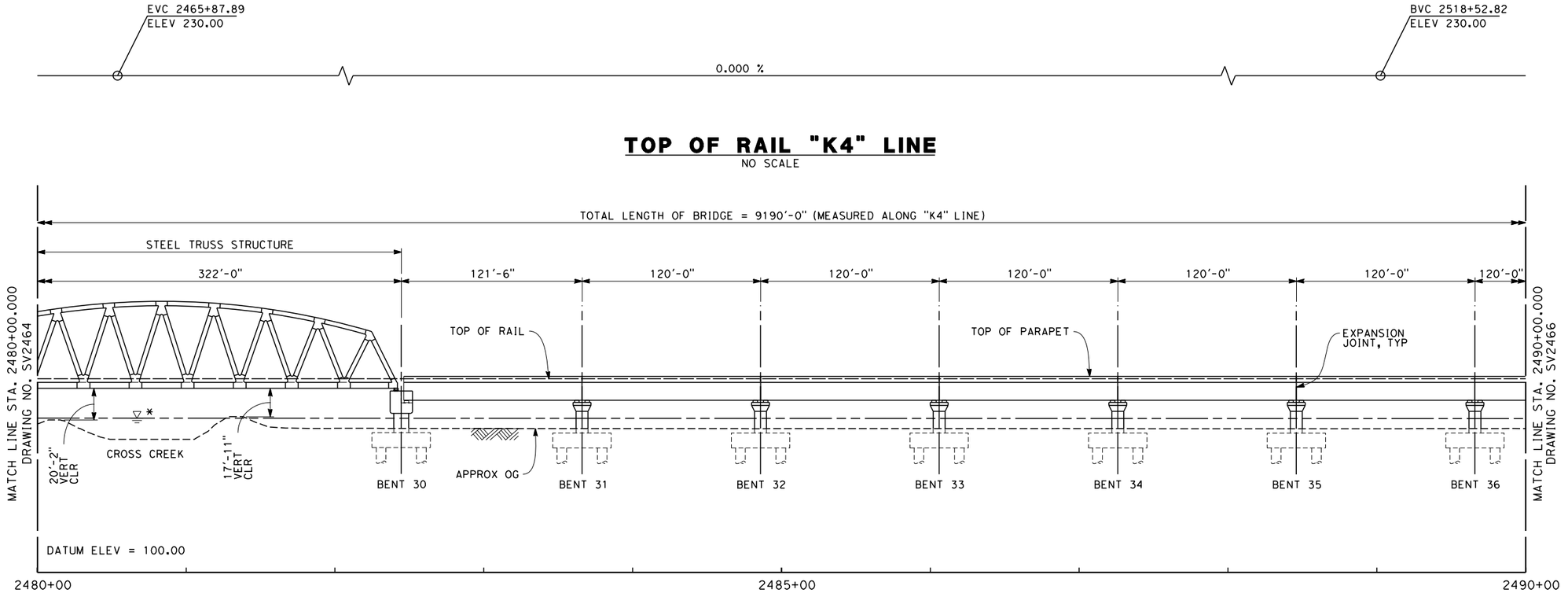
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

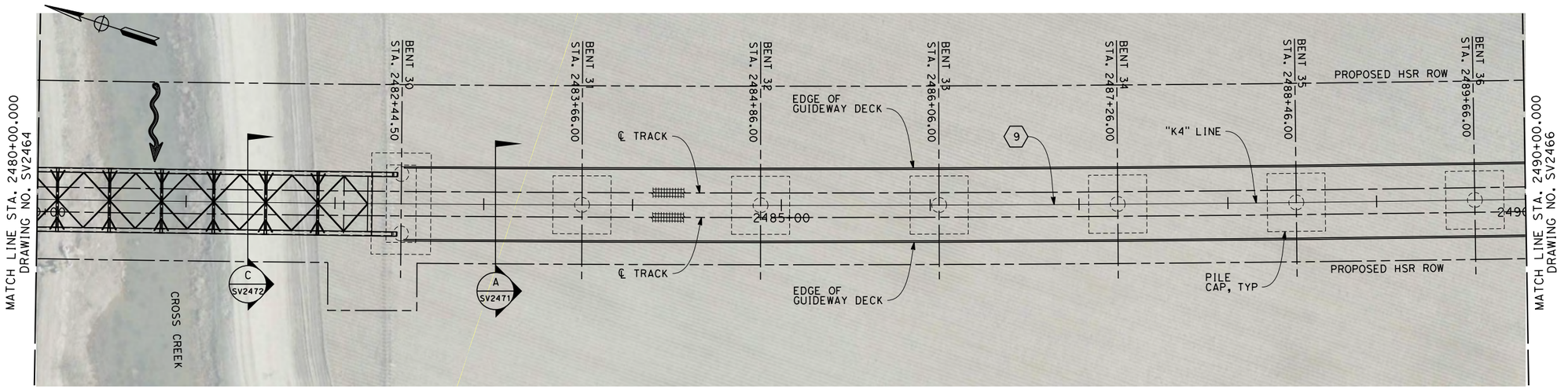
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DRAWING NO. SV2464
SCALE AS SHOWN
SHEET NO. 5 OF 13

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TOP OF RAIL "K4" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)
R = 30500.00'
Δ = 49° 01' 18.3"
T = 13906.6'
L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

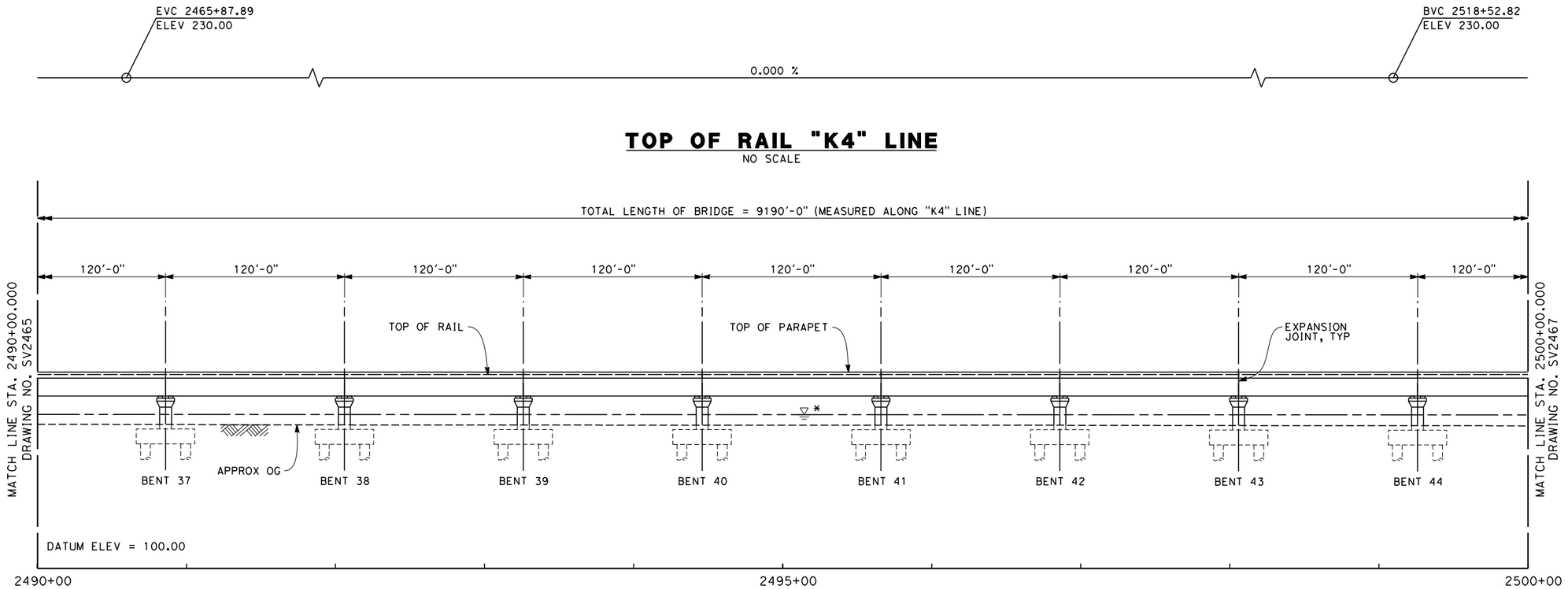
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2465
SCALE AS SHOWN
SHEET NO. 6 OF 13

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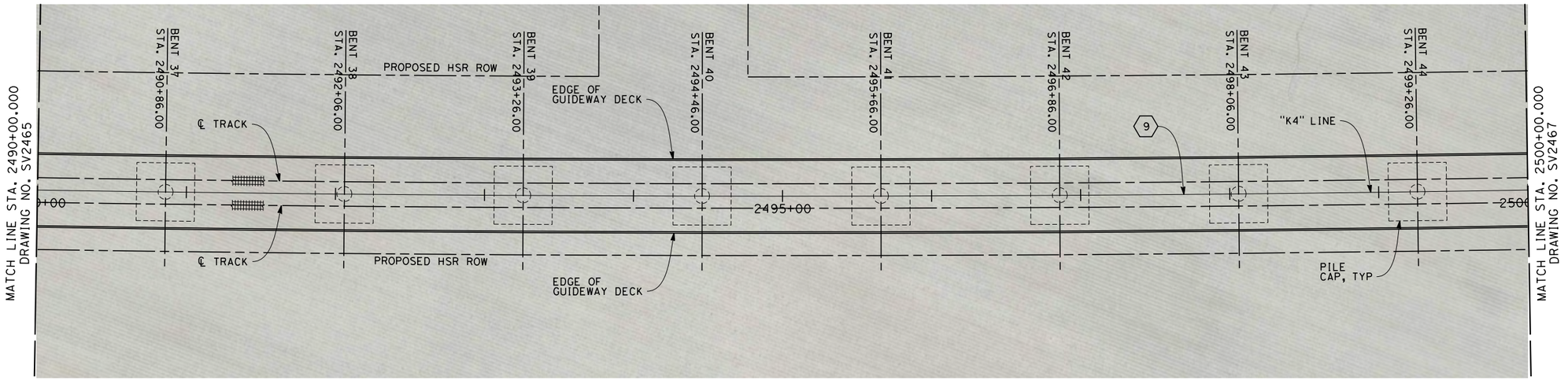


TOP OF RAIL "K4" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'

Δ = 49° 01' 18.3"

T = 13906.6'

L = 26095.5'

40 0 40 80

1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

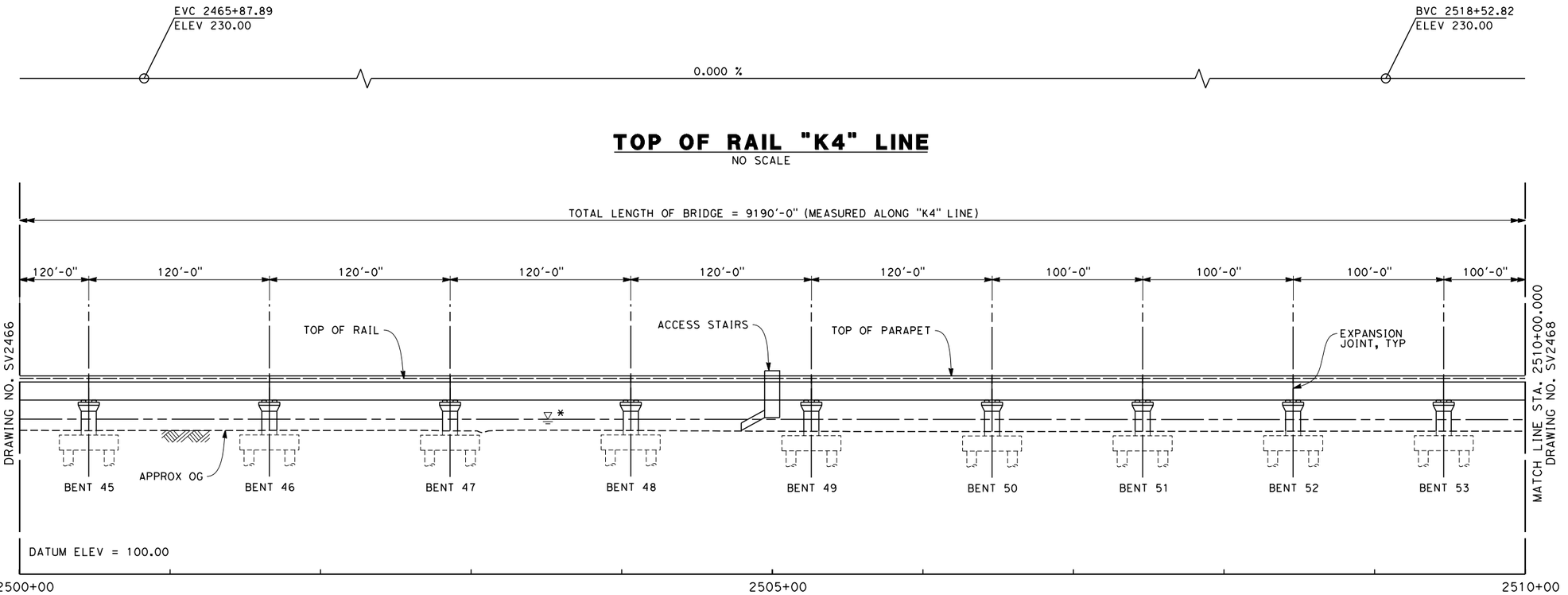
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

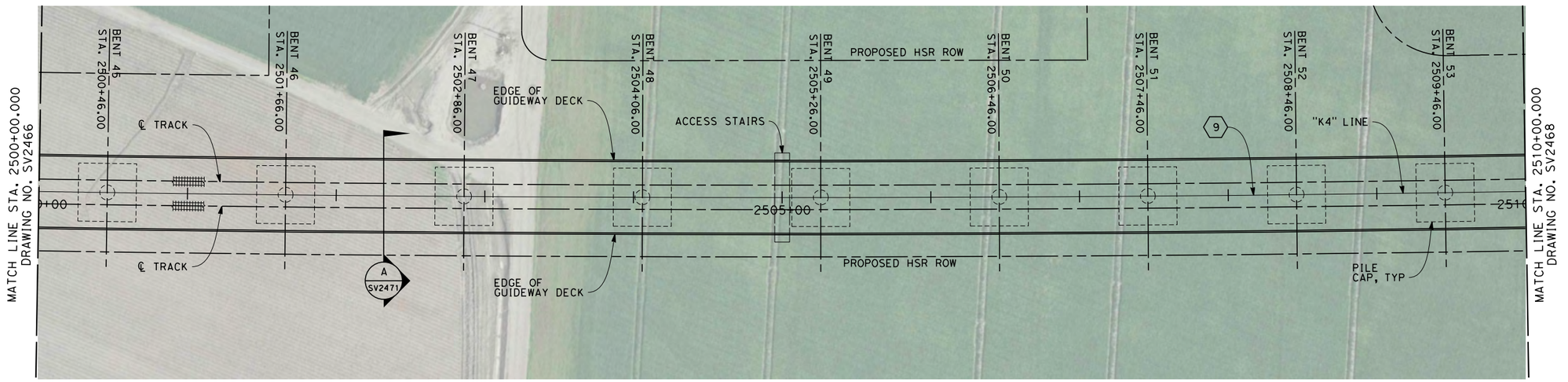
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2466
SCALE AS SHOWN
SHEET NO. 7 OF 13

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TOP OF RAIL "K4" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'

Δ = 49° 01' 18.3"

T = 13906.6'

L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

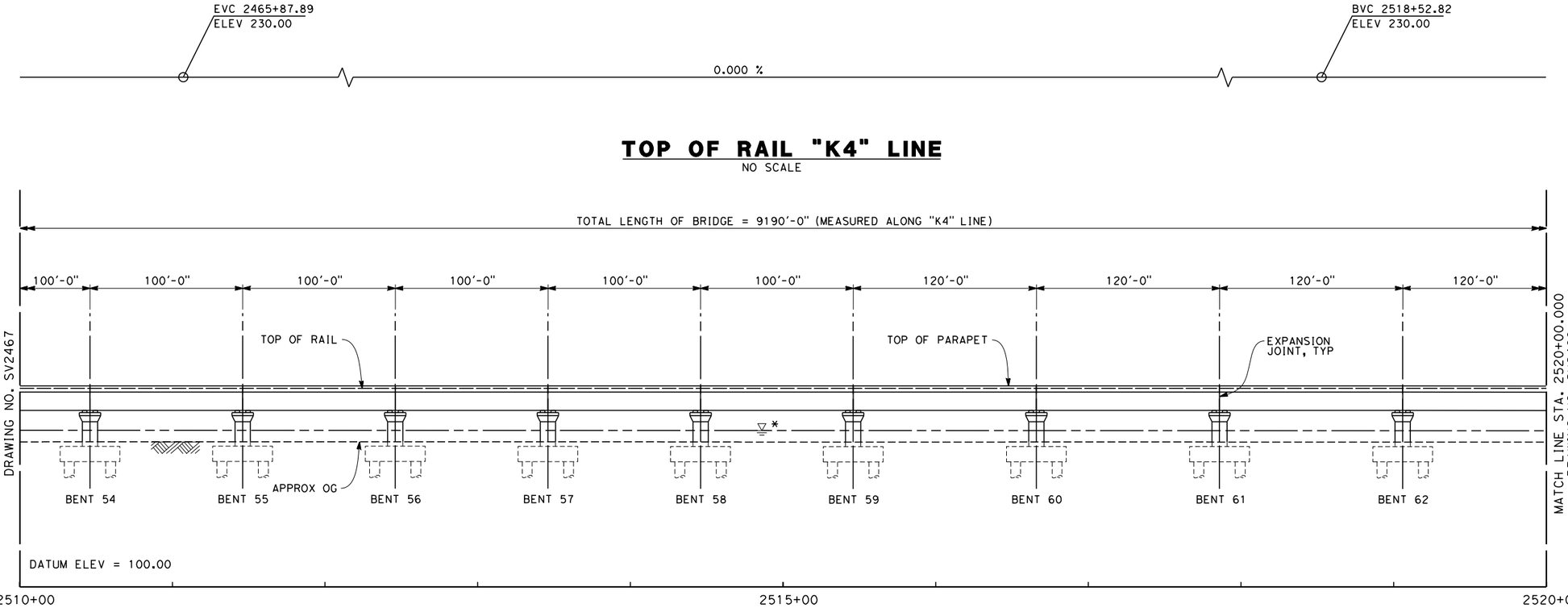
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

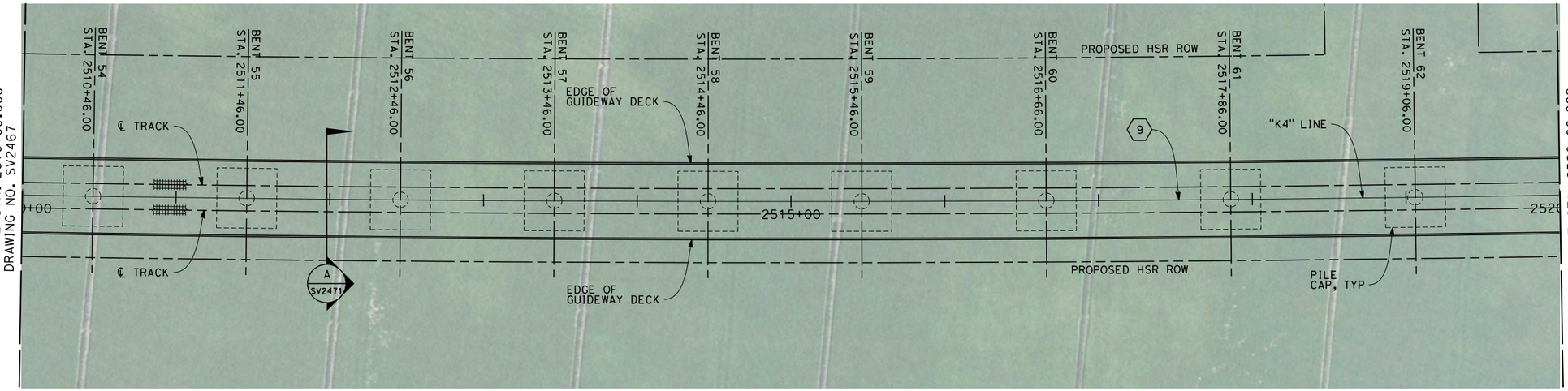
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2467
SCALE AS SHOWN
SHEET NO. 8 OF 13

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TOP OF RAIL "K4" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

9

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Δ = 49° 01' 18.3"
T = 13906.6'
L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

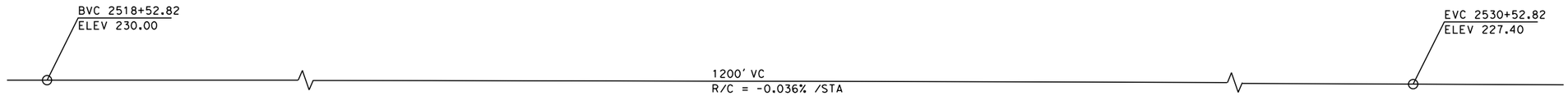
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

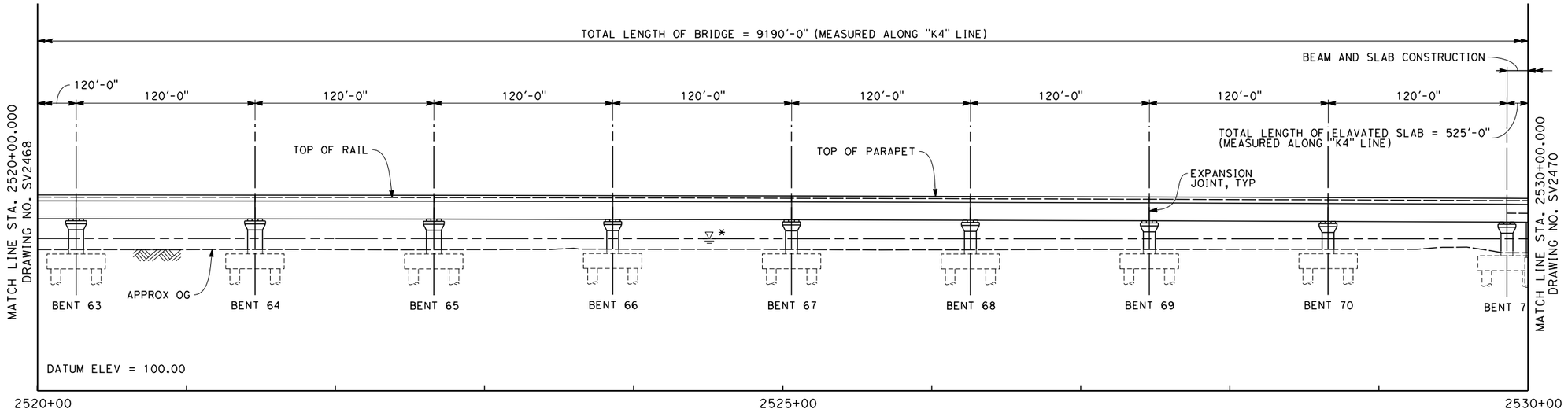
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2468
SCALE AS SHOWN
SHEET NO. 9 OF 13

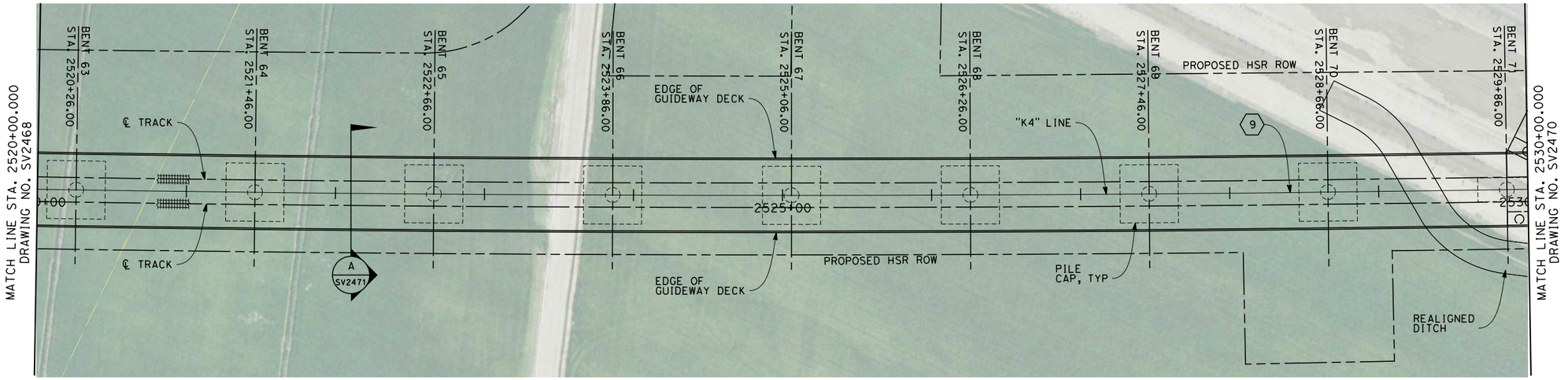
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TOP OF RAIL "K4" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'
Δ = 49° 01' 18.3"
T = 13906.6'
L = 26095.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

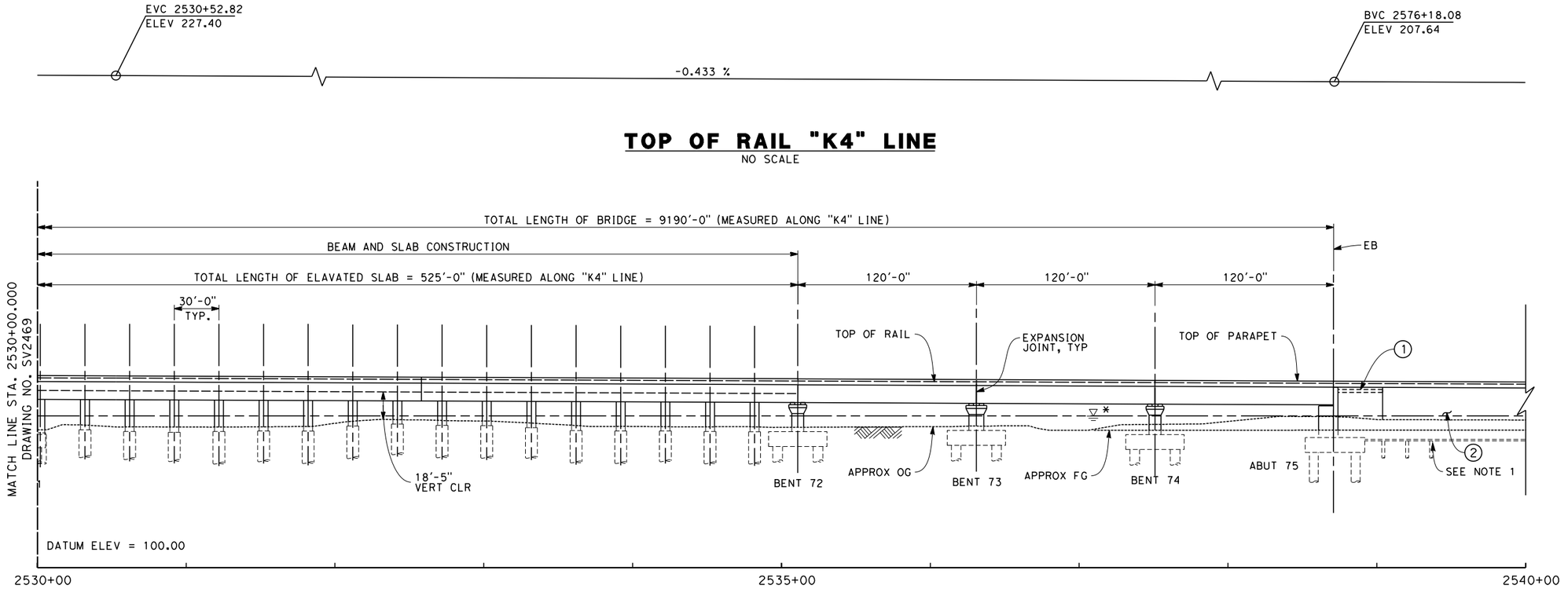
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2469
SCALE AS SHOWN
SHEET NO. 10 OF 13

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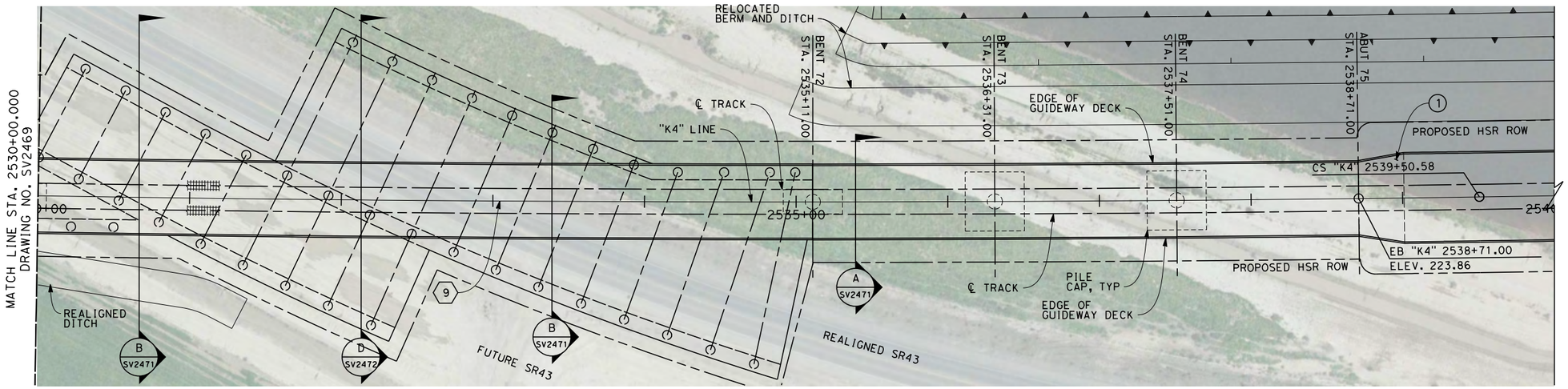


TOP OF RAIL "K4" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(9)

R = 30500.00'

Δ = 49° 01' 18.3"

T = 13906.6'

L = 26095.5'

40 0 40 80

1"=40'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

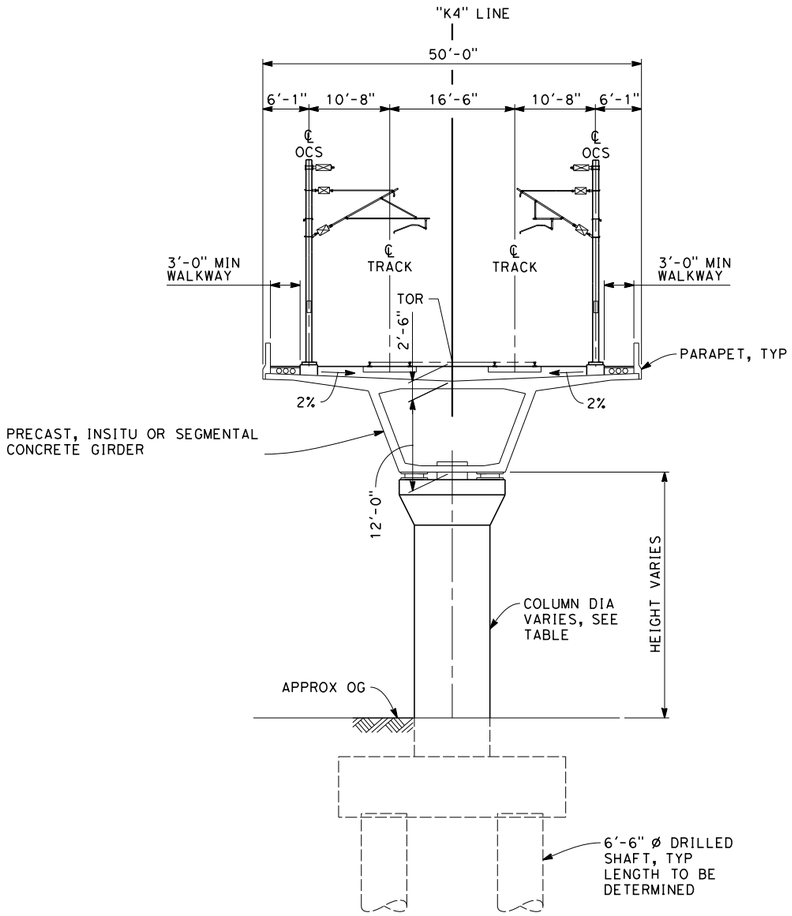
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2470
SCALE AS SHOWN
SHEET NO. 11 OF 13

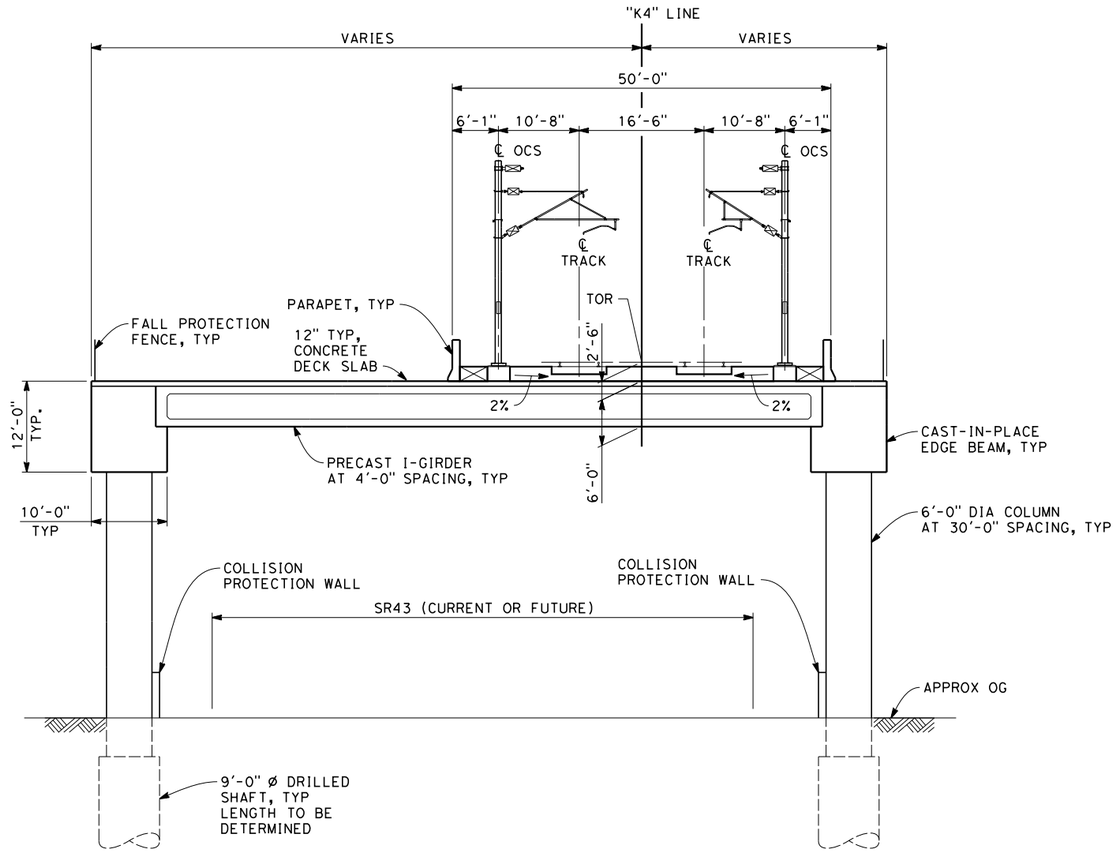
COLUMN DIAMETERS	
HEIGHT TO SOFFIT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



SECTION A

SCALE: 1" = 10'

STA 2446+81.00 THROUGH 2479+22.50
STA 2482+44.50 THROUGH 2529+86.00
STA 2535+11.00 THROUGH 2538+71.00



SECTION B

SCALE: 1" = 10'

STA 2529+86.00 THROUGH 2531+50.00
STA 2532+80.00 THROUGH 2535+11.00

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

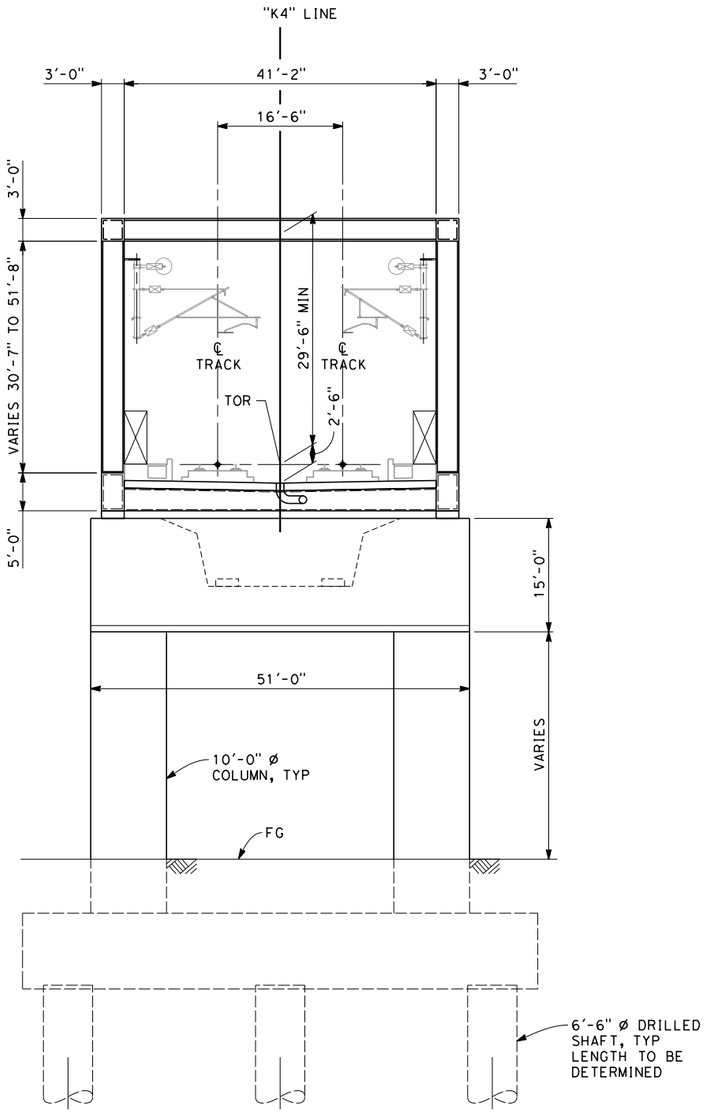
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
TYPICAL SECTIONS

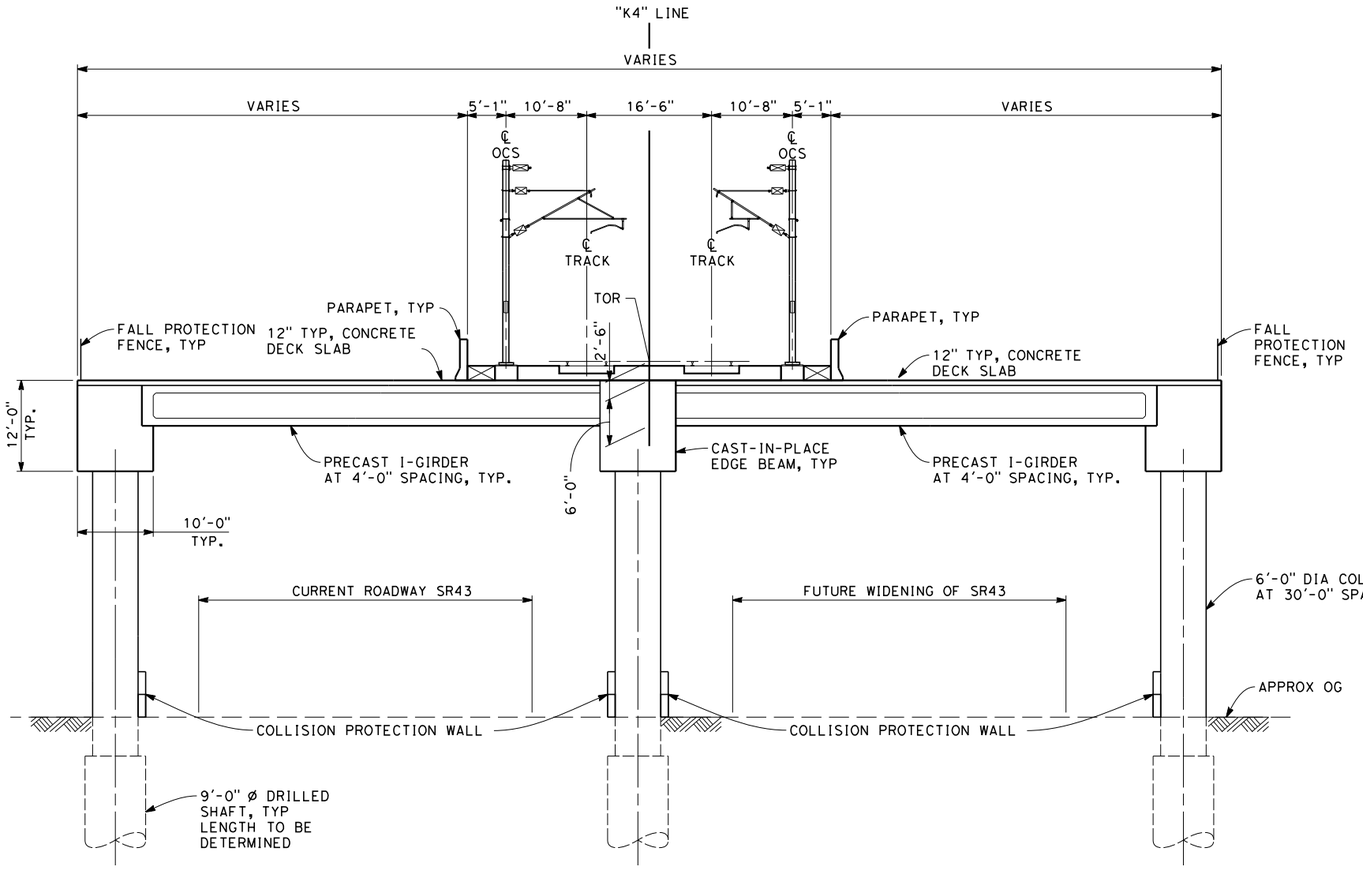
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2471
SCALE AS SHOWN
SHEET NO. 12 OF 13



SECTION C

SCALE: 1" = 10'

STA 2479+22.50 THROUGH 2482+44.50



SECTION D

SCALE: 1" = 10'

STA 2531+50.00 THROUGH 2532+80.00

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
CROSS CREEK VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2472
SCALE AS SHOWN
SHEET NO. 13 OF 13

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

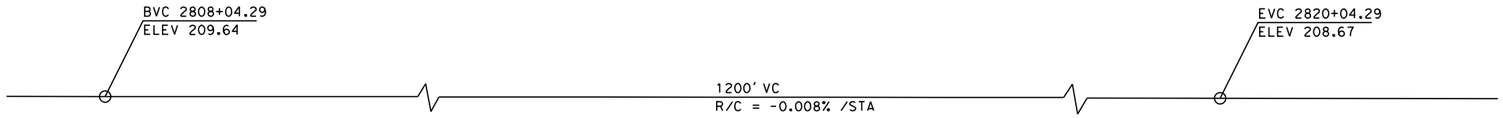
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
WHITLEY AVE/SR137 UNDERPASS
KEY MAP

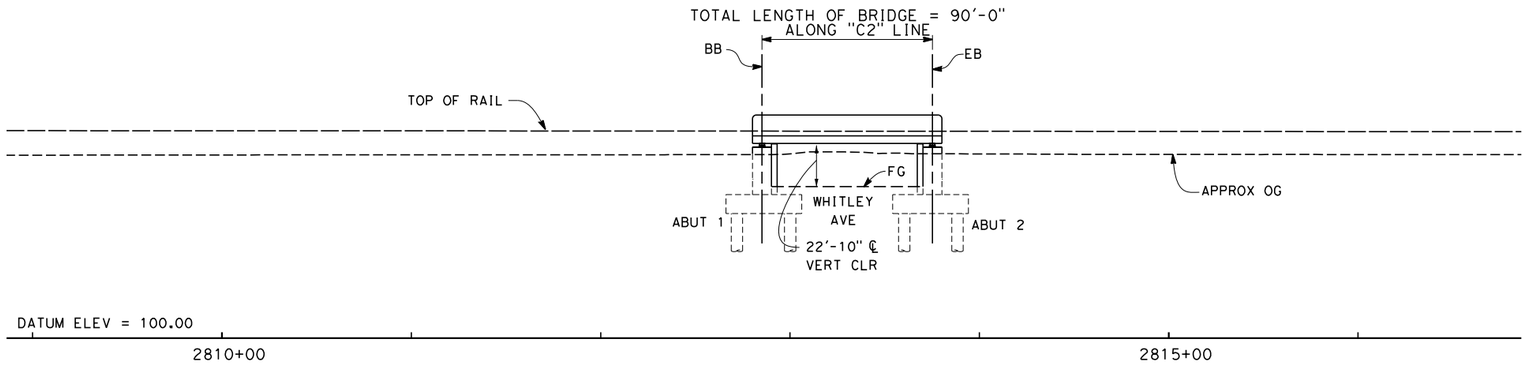
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2445
SCALE AS SHOWN
SHEET NO. 1 OF 2

04/02/2014 - RFP No.: HSR13-57

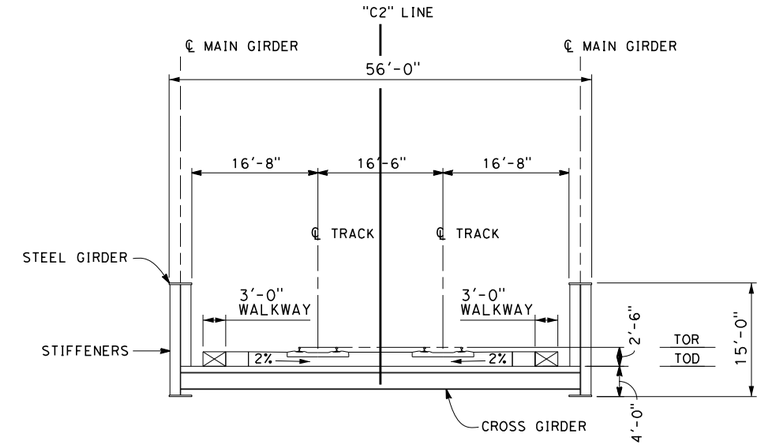
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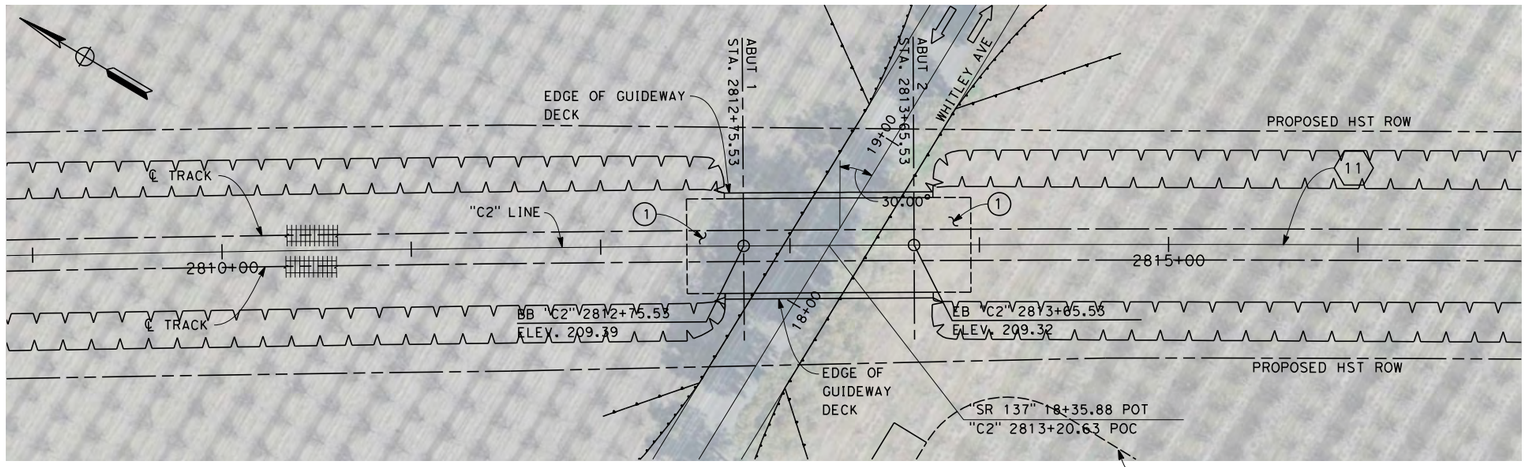
TOP OF RAIL "C2" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



TYPICAL SECTION
SCALE 1" = 10'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. UTILITY LOCATIONS TO BE DETERMINED

LEGEND:
- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALL
- * ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".
- INDICATES RAILROAD AND HIGH-SPEED TRAIN TRACK

CURVE DATA

(11)

R = 32000.00'
Δ = 0° 50' 01.6"
T = 618.5'
L = 15313.7'

10 0 10 20 — 1"=10'

40 0 40 80 — 1"=40'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
WHITLEY AVE/SR137 UNDERPASS
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2446
SCALE AS SHOWN
SHEET NO. 2 OF 2

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

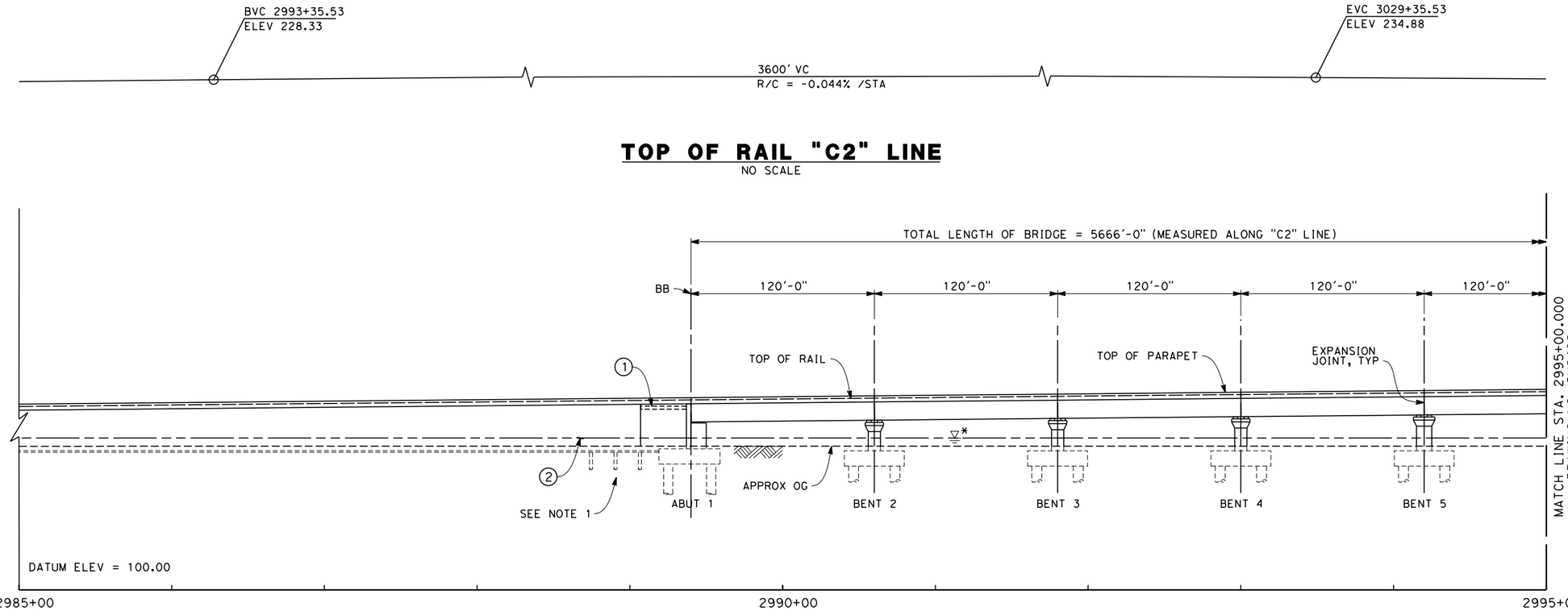
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2490
SCALE AS SHOWN
SHEET NO. 1 OF 11

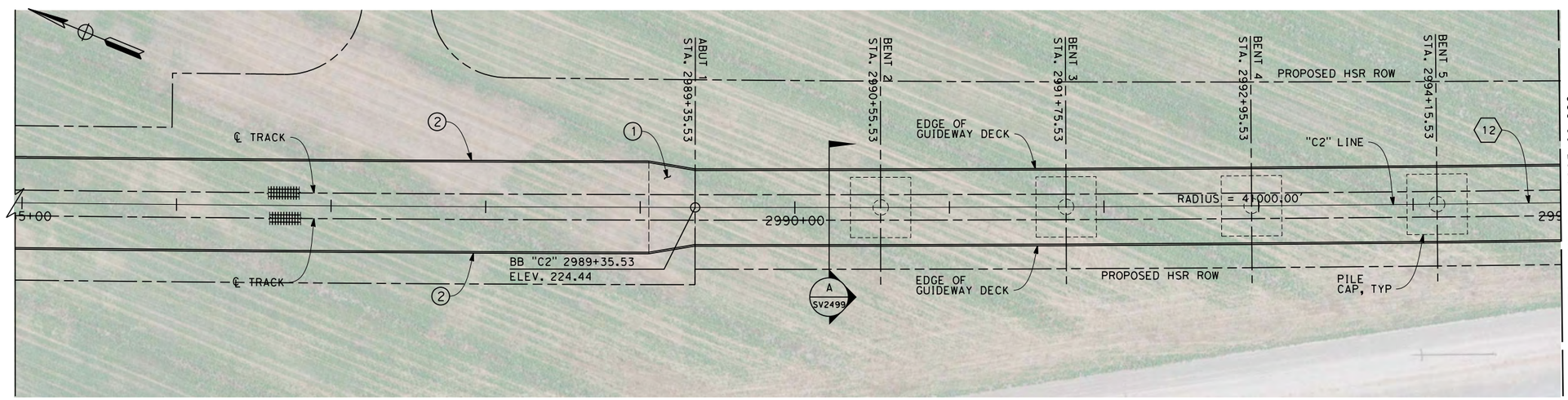
04/02/2014 - RFP No.: HSR13-57

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TOP OF RAIL "C2" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

⬡12

R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

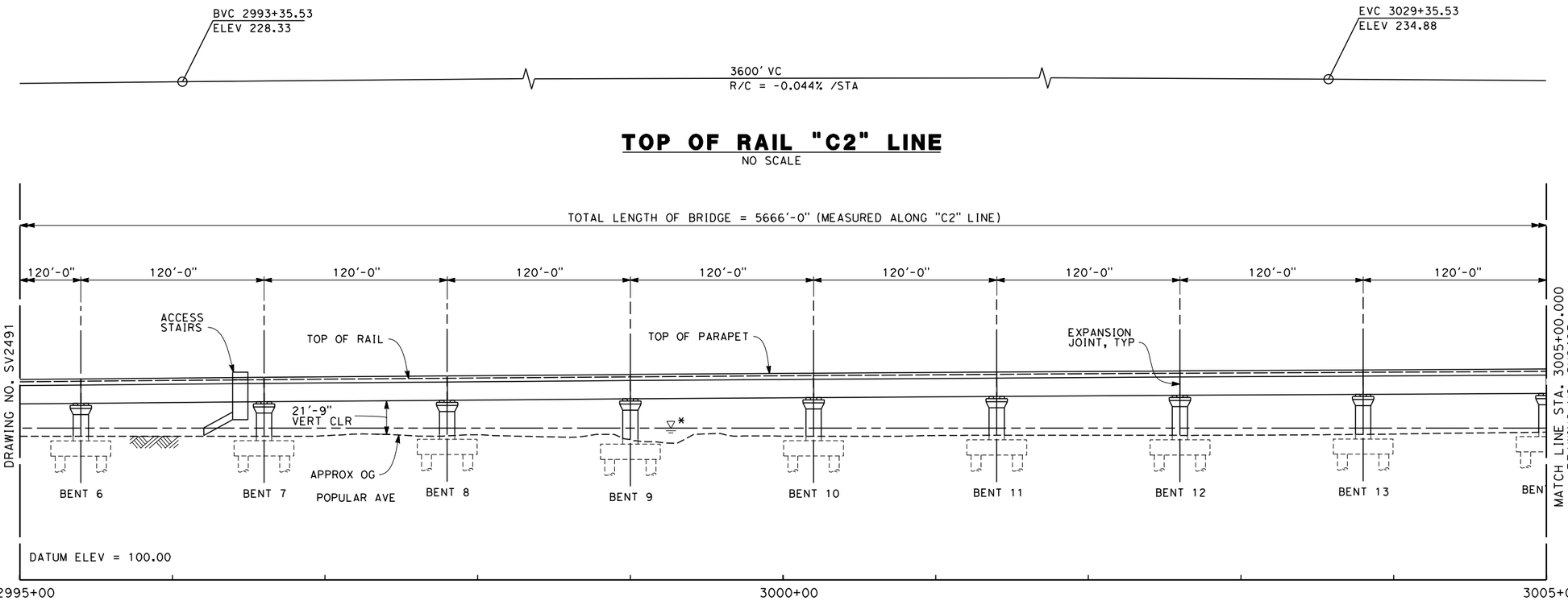
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

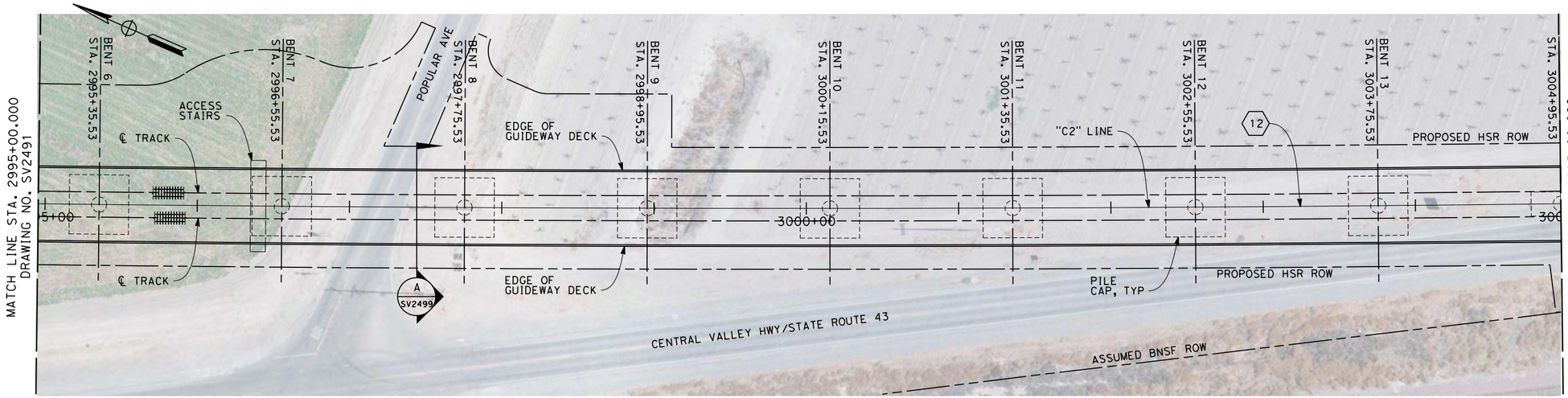
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2491
SCALE AS SHOWN
SHEET NO. 2 OF 11

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TOP OF RAIL "C2" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(12)
R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

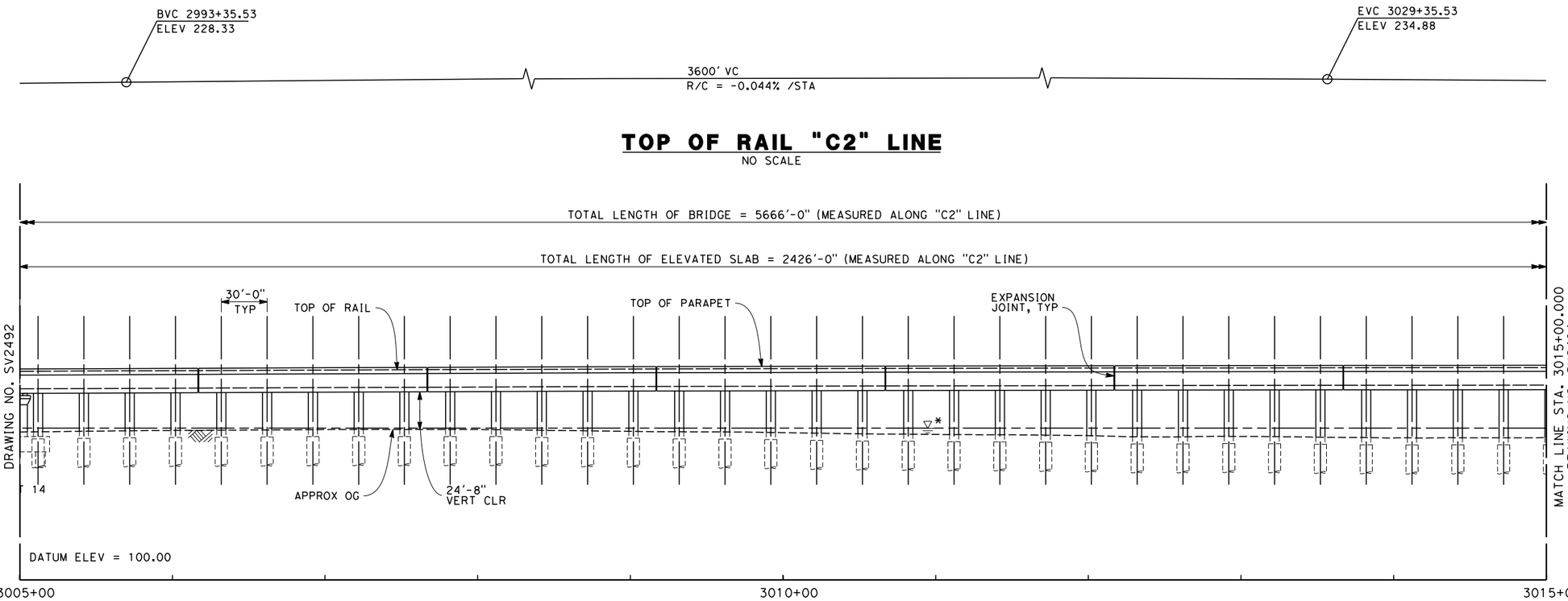
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

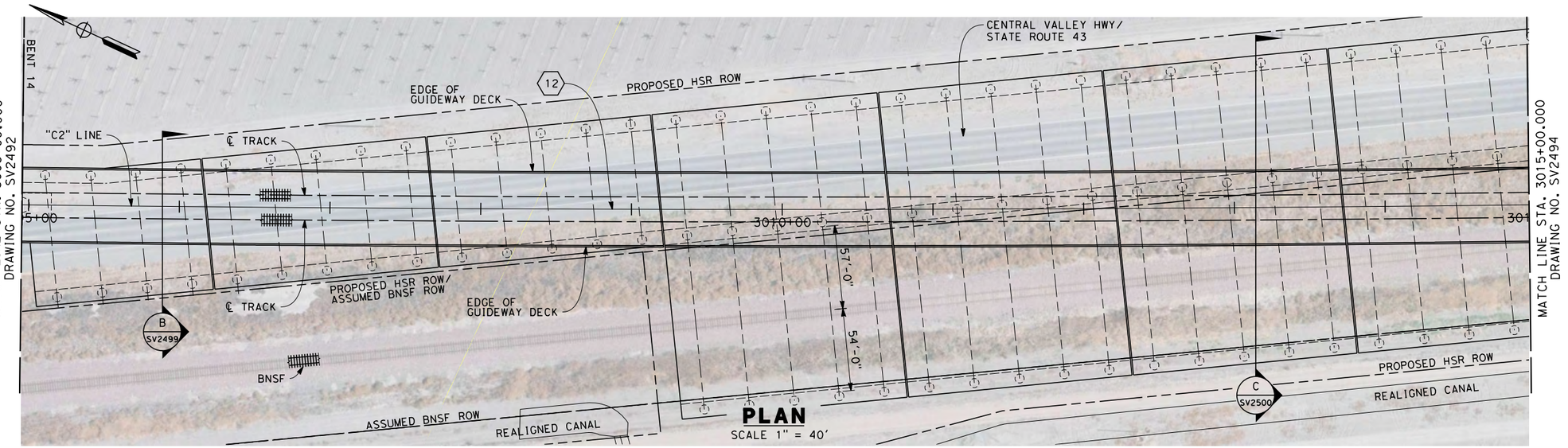
CONTRACT NO. HSR 06-0003
DRAWING NO. SV2492
SCALE AS SHOWN
SHEET NO. 3 OF 11

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TOP OF RAIL "C2" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(12)
R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

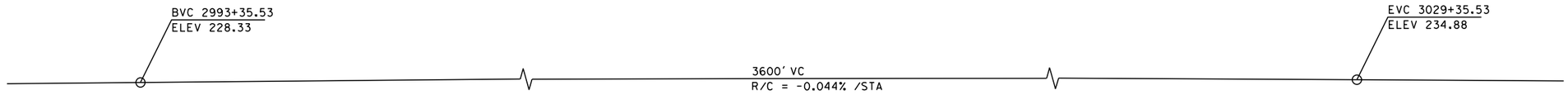
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

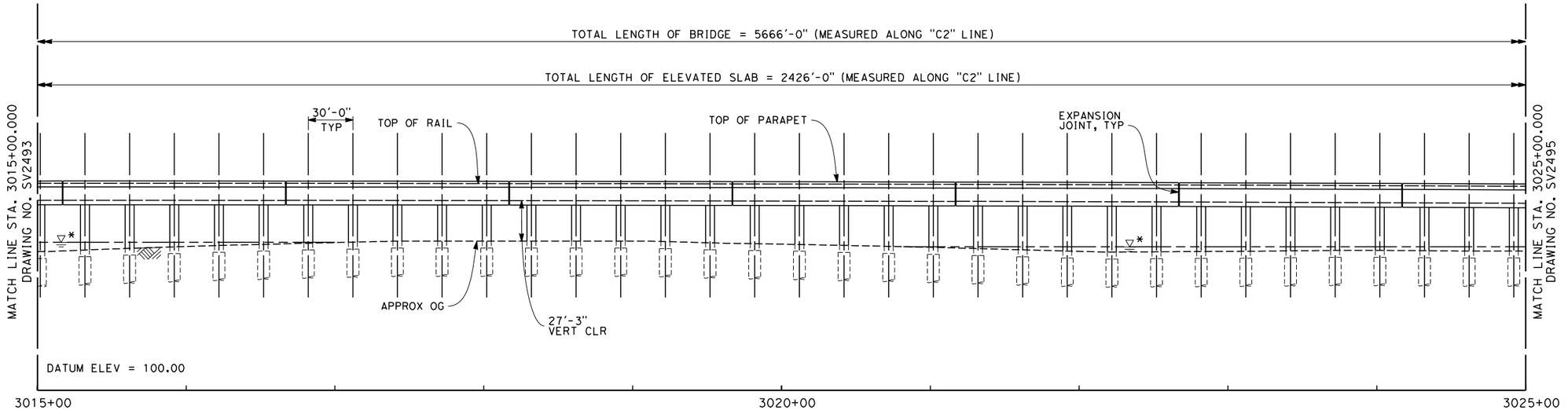
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2493
SCALE AS SHOWN
SHEET NO. 4 OF 11

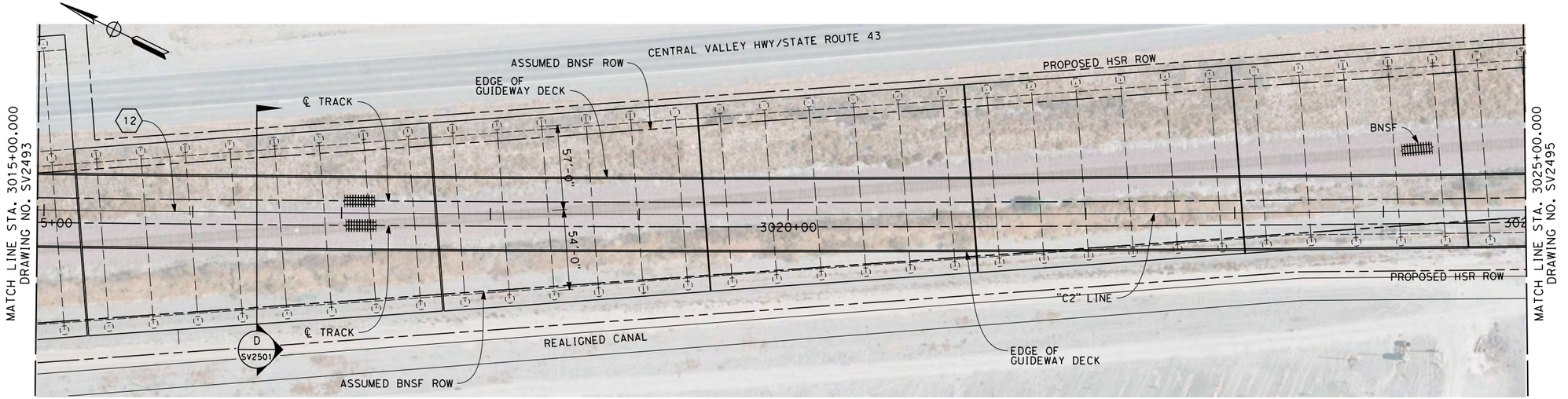
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TOP OF RAIL "C2" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(12)
R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

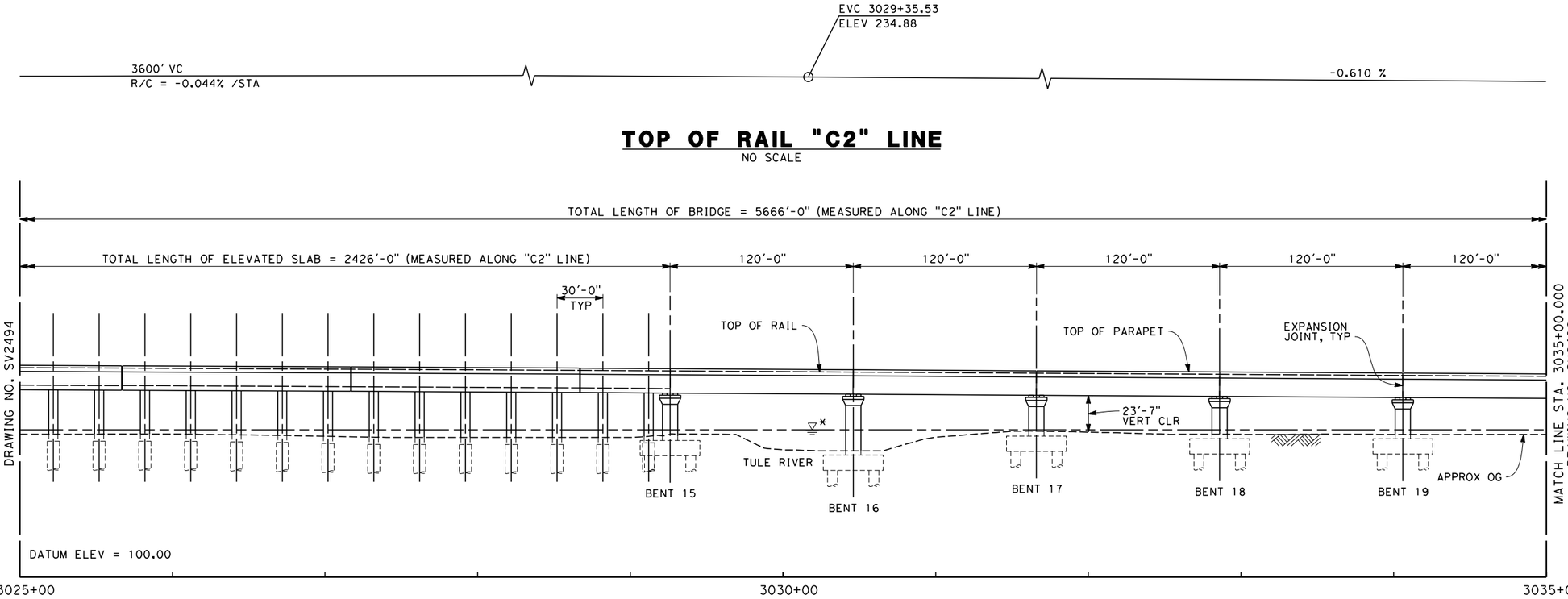
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2494
SCALE AS SHOWN
SHEET NO. 5 OF 11

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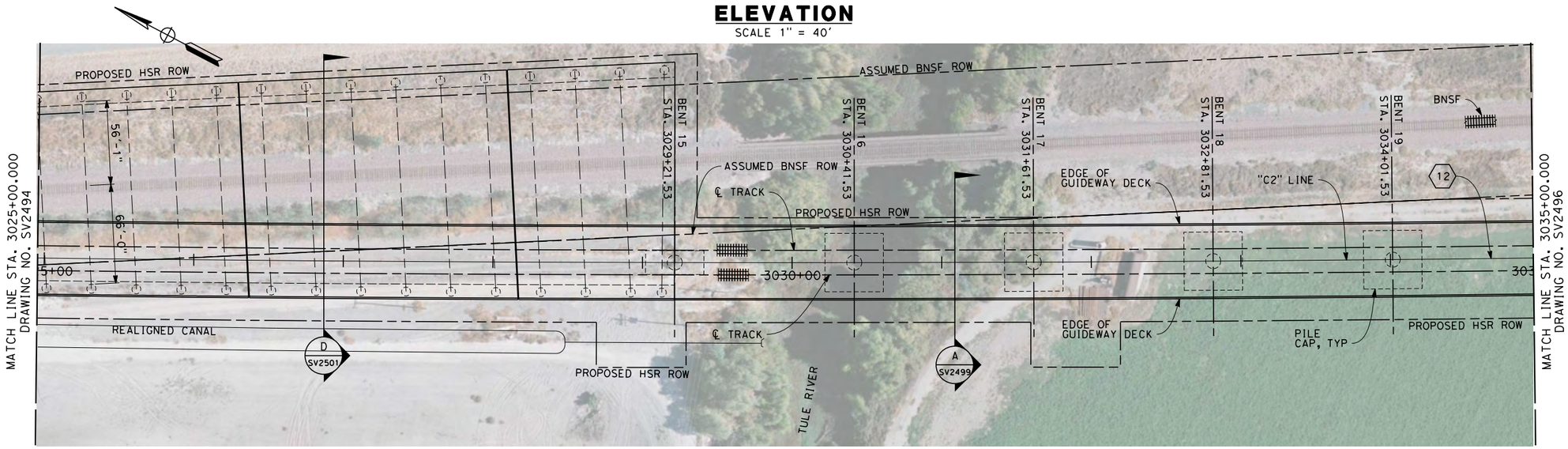


TOP OF RAIL "C2" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(12)

R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

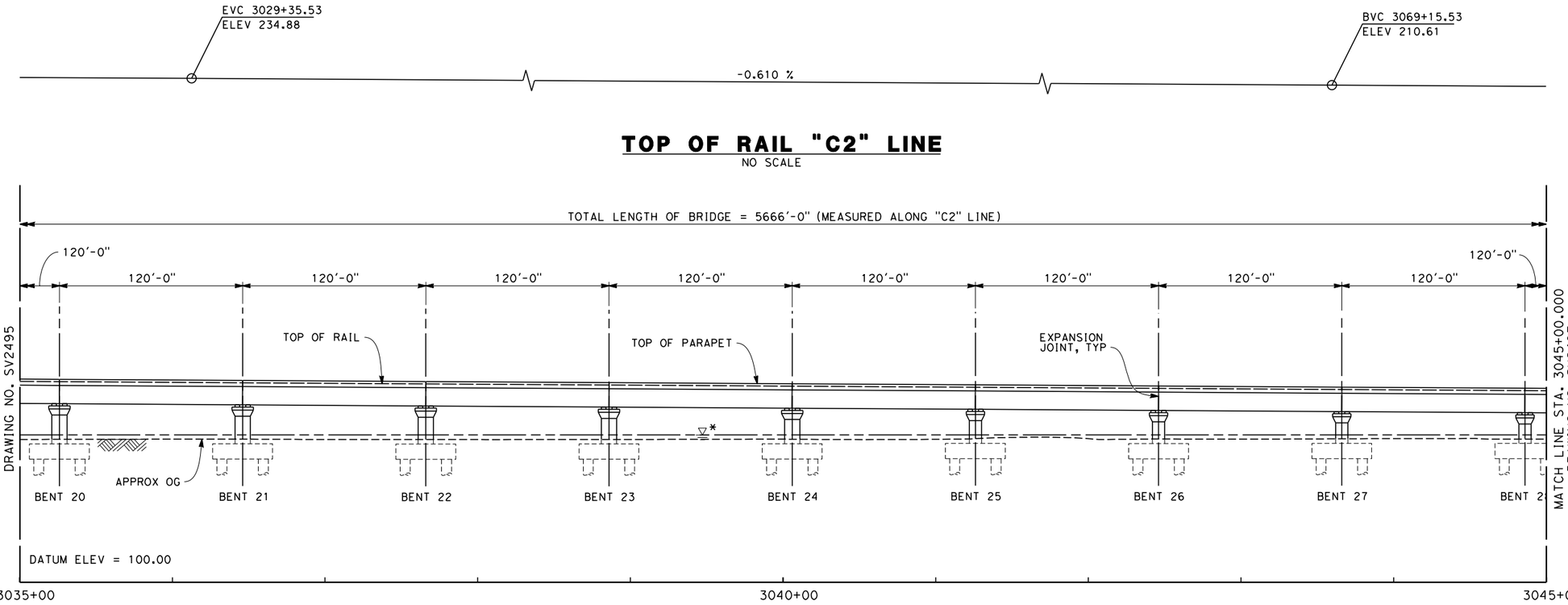
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2495
SCALE AS SHOWN
SHEET NO. 6 OF 11

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NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(12)

R = 41000.00'
Δ = 01° 14' 39.4"
T = 1846.0'
L = 9734.5'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

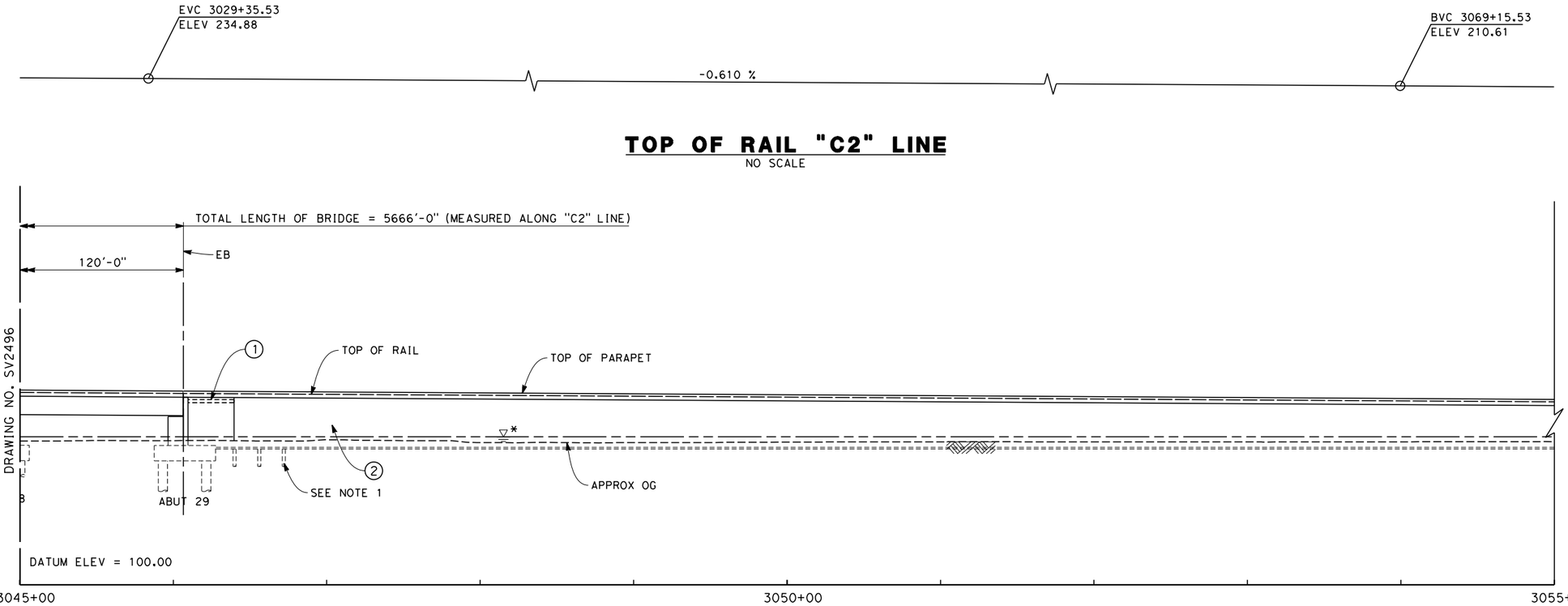
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2496
SCALE AS SHOWN
SHEET NO. 7 OF 11

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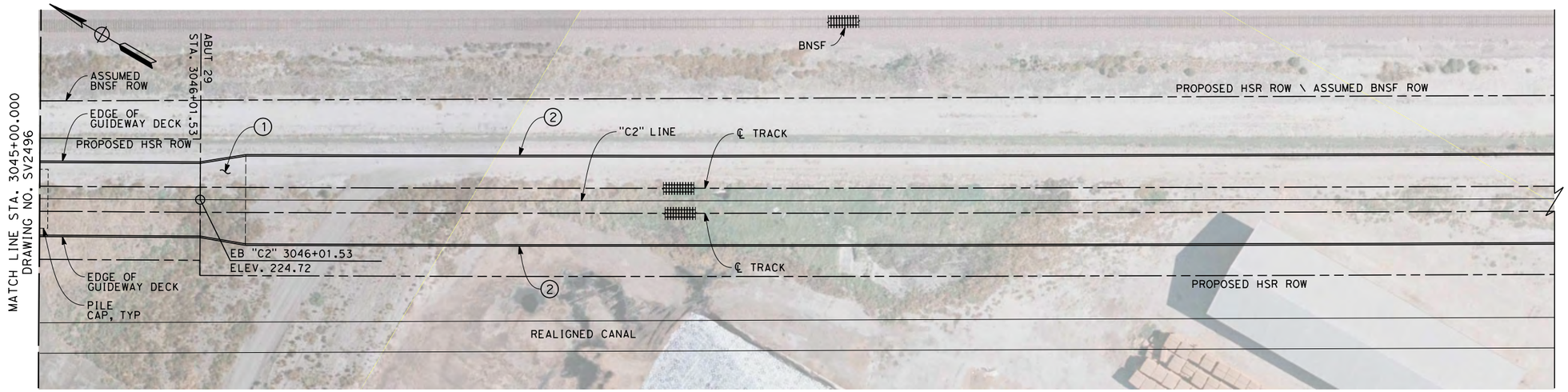


TOP OF RAIL "C2" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

(1) STRUCTURE APPROACH SLAB

(2) RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

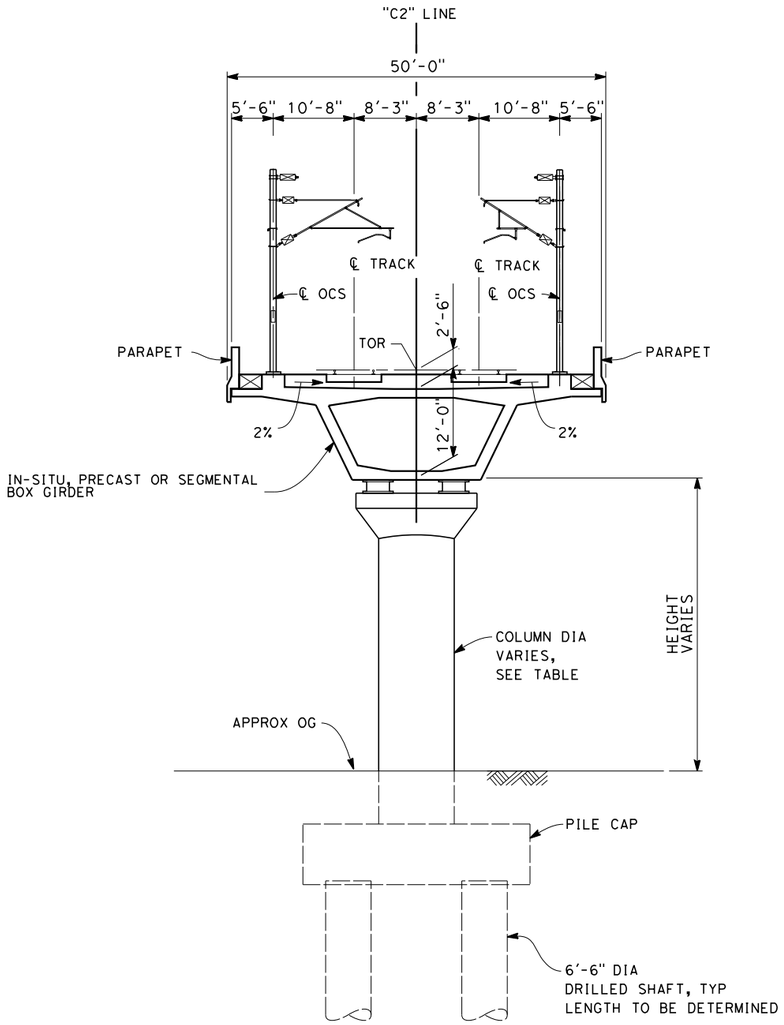
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2497
SCALE AS SHOWN
SHEET NO. 8 OF 11

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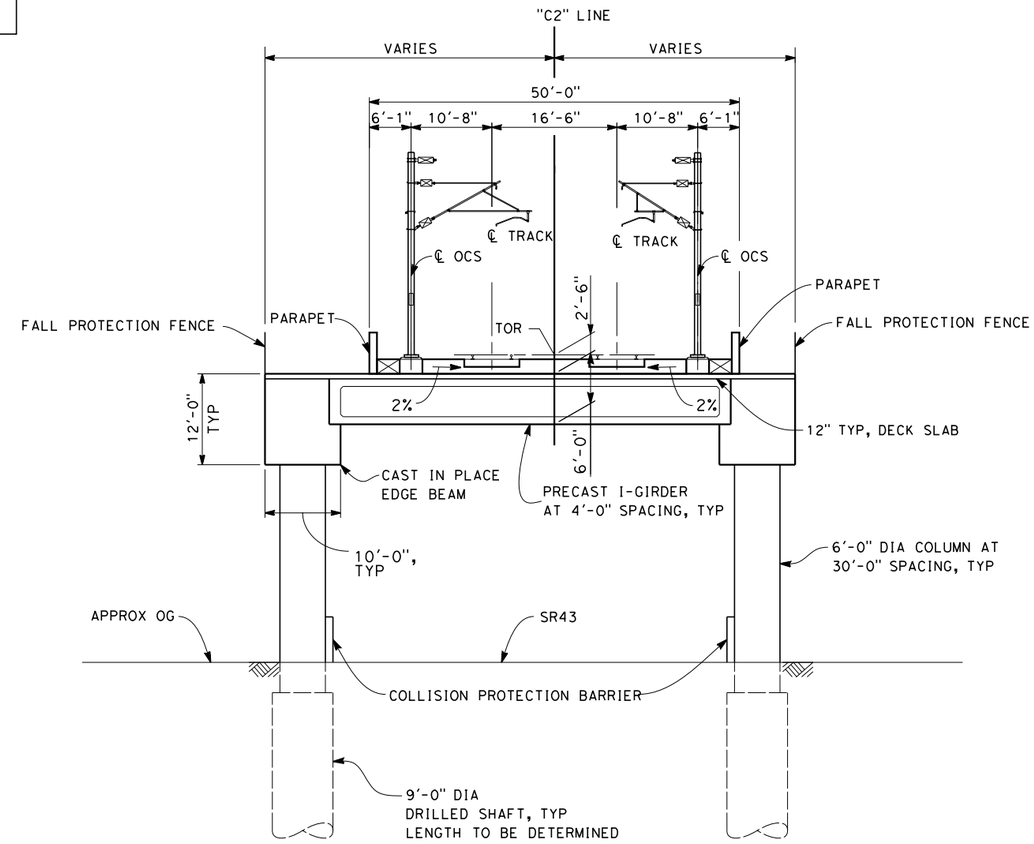
COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-20	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



SECTION A

SCALE: 1" = 10'

STA 2989+40 THROUGH 3005+00
STA 3029+26 THROUGH 3046+06



SECTION B

SCALE: 1" = 10'

STA 3005+00 THROUGH 3009+00

NOTES:

1. PIER PROTECTION IS REQUIRED WHERE COLUMN FACE IS CLOSER THAT 54 FT FROM ROADWAY.

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

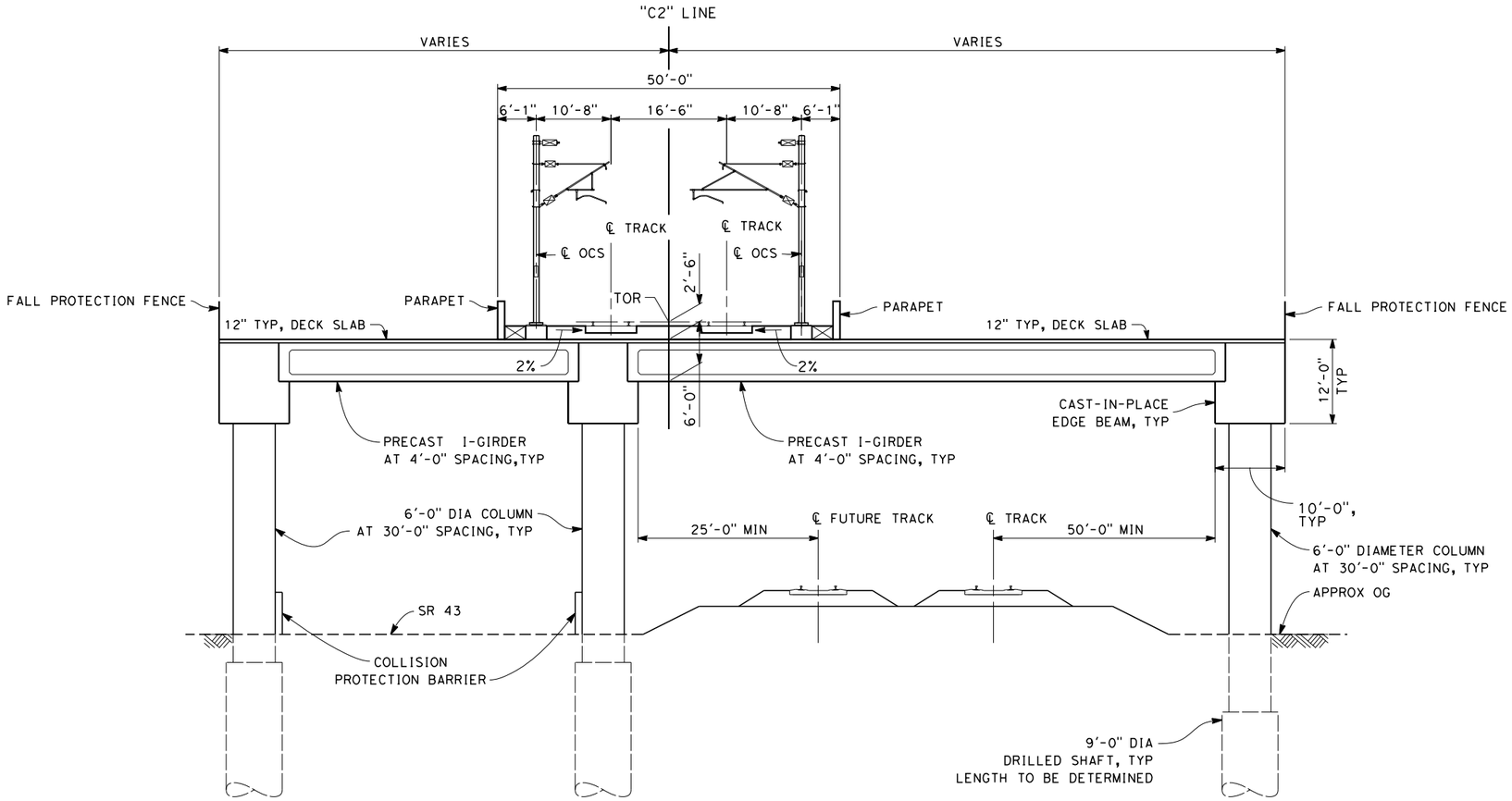
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2499
SCALE AS SHOWN
SHEET NO. 9 OF 11

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NOTES:

1. PIER PROTECTION IS REQUIRED WHERE COLUMN FACE IS CLOSER THAT 54 FT FROM ROADWAY.

SECTION C

SCALE: 1" = 10'

STA 3009+00 THROUGH 3015+20

10 0 10 20
1"-10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP

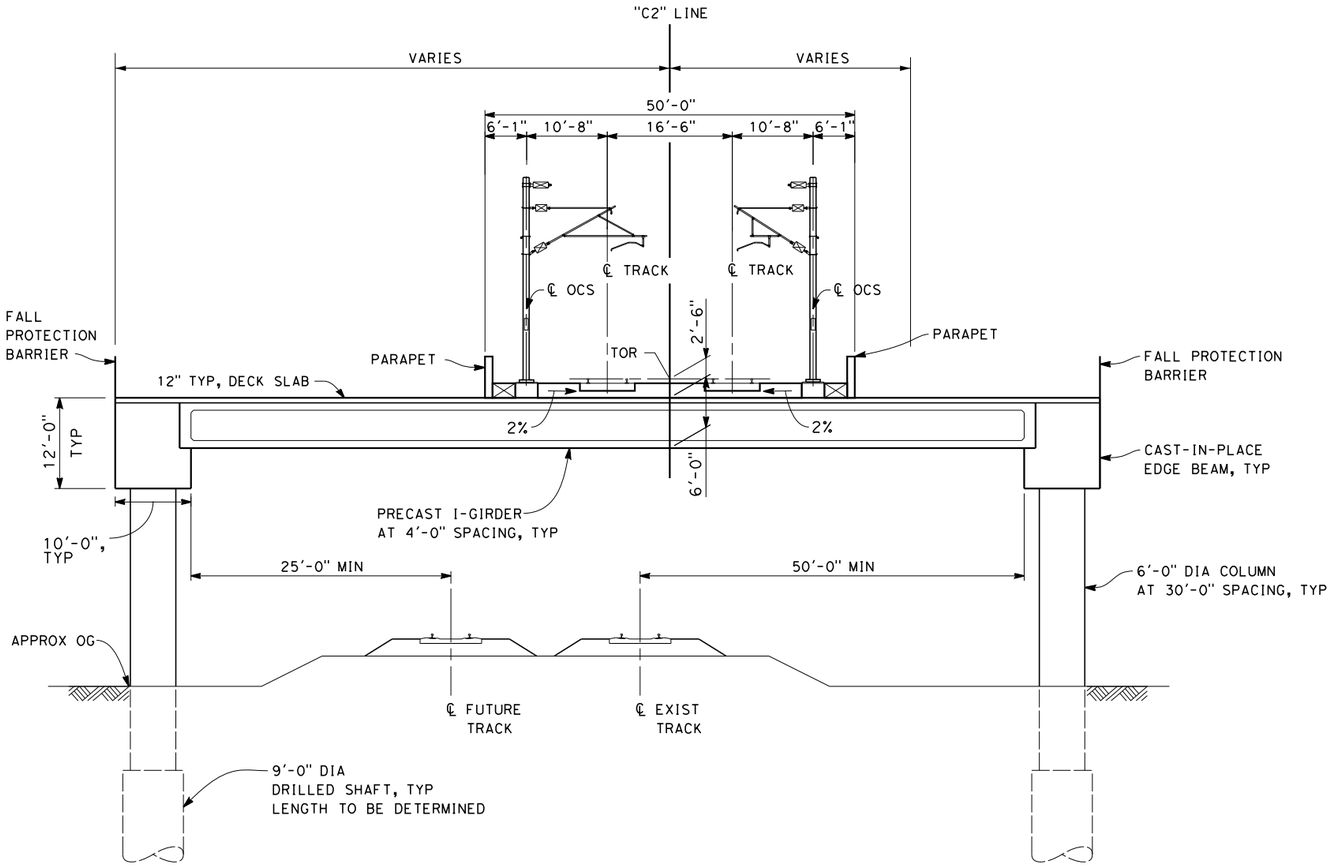
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2500
SCALE AS SHOWN
SHEET NO. 10 OF 11

04/02/2014 - RFP No.: HSR13-57

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SECTION D

SCALE: 1" = 10'

STA 3015+20 THROUGH 3029+26

10 0 10 20
1"-10'

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
STATE ROUTE 43 BNSF VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV2501
SCALE AS SHOWN
SHEET NO. 11 OF 11



LEGEND

EXISTING FREIGHT RAILROAD

PROPOSED CHST

3000 0 3000 6000

1"-3000'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP

CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

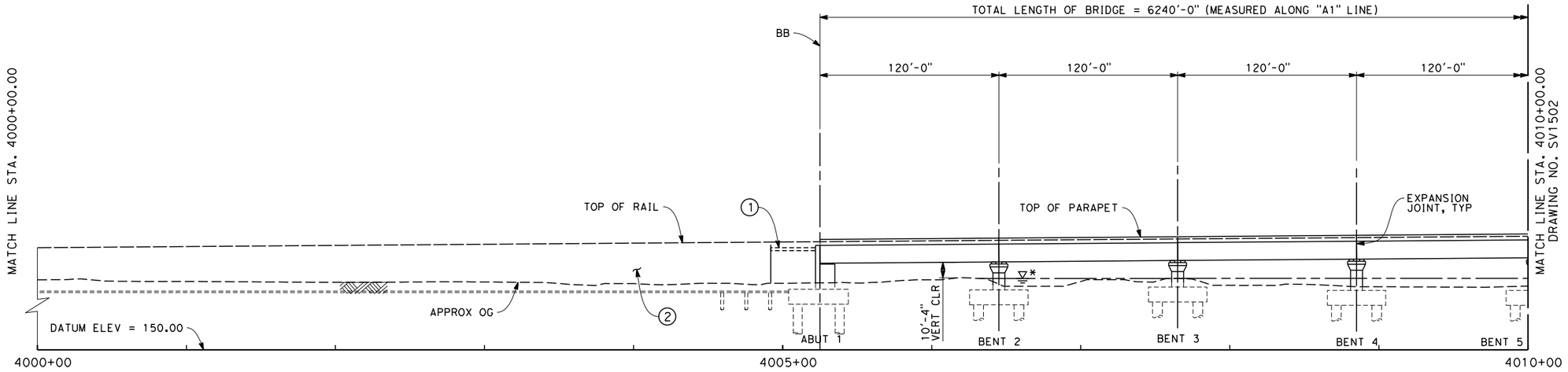
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1500
SCALE AS SHOWN
SHEET NO. 1 OF 9

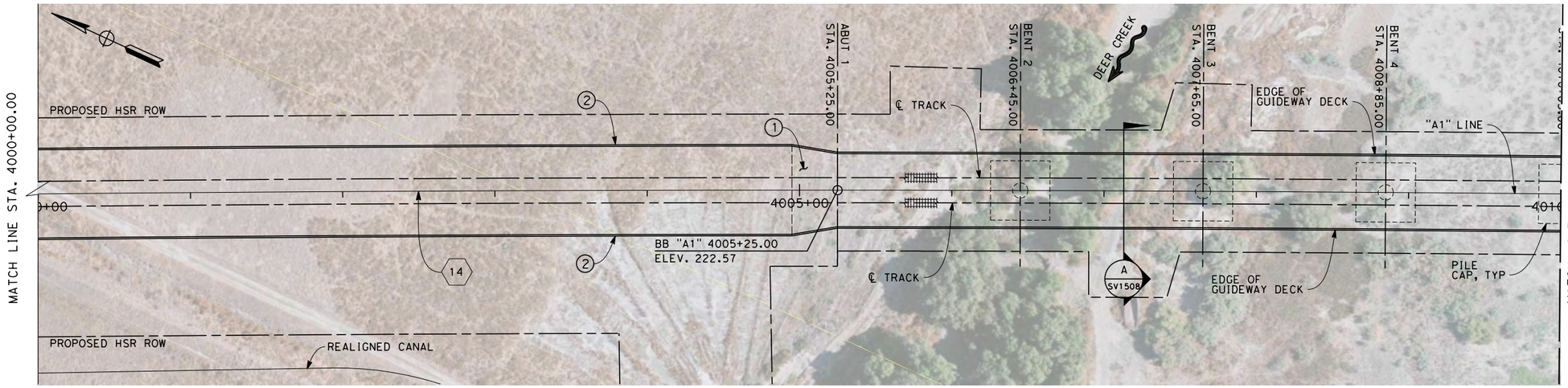
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TOP OF RAIL "A1" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
(1) STRUCTURE APPROACH SLAB
(2) RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
(14)
R = 50500.0'
Δ = 24° 16' 19.0"
T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

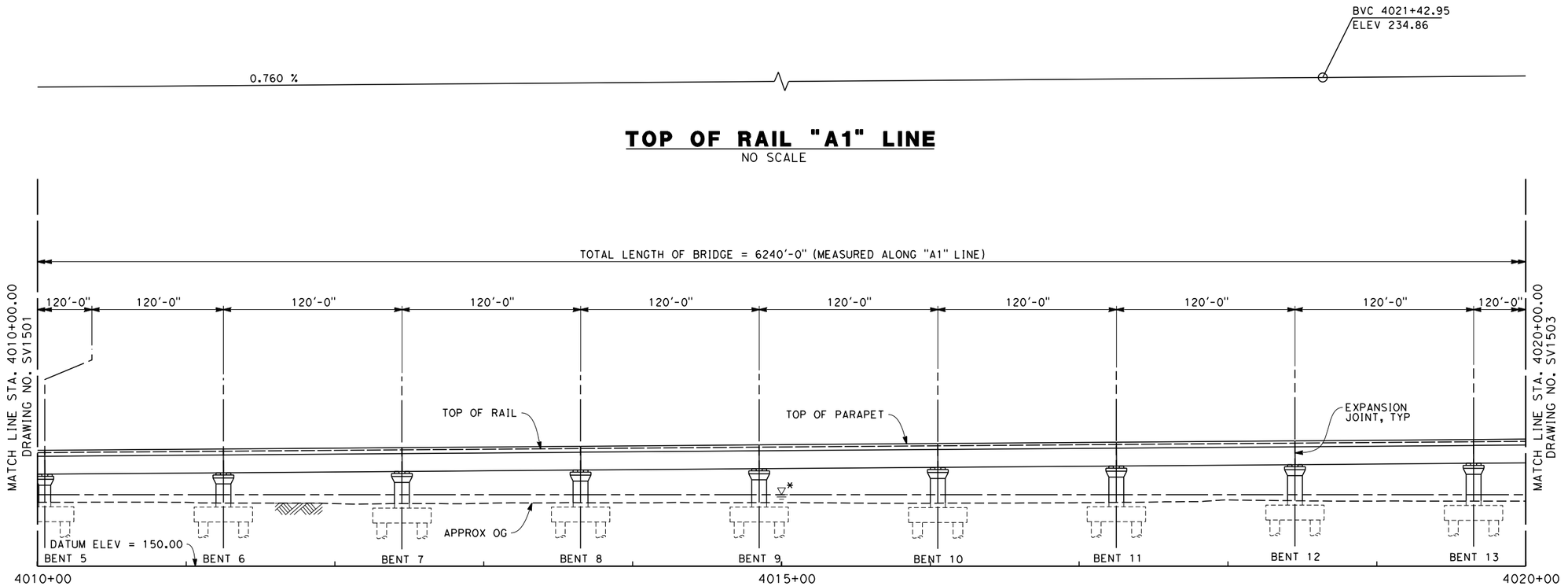
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

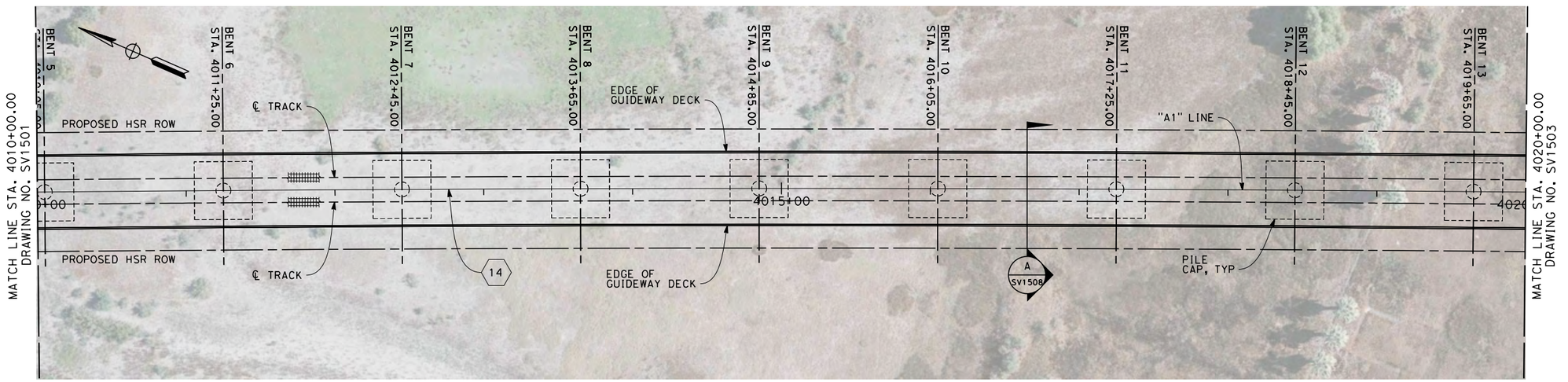
CONTRACT NO. HSR 06-0003
DRAWING NO. SV1501
SCALE AS SHOWN
SHEET NO. 2 OF 9

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TOP OF RAIL "A1" LINE
NO SCALE

ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

14

R = 50500.0'
Δ = 24° 16' 19.0"
T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

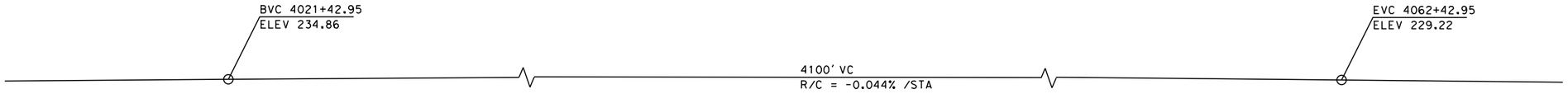
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

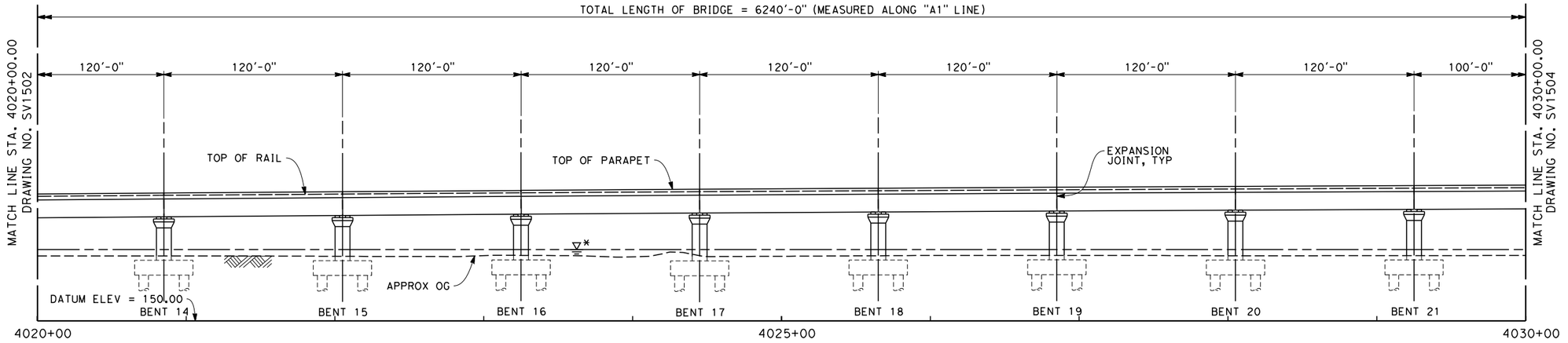
CONTRACT NO. HSR 06-0003
DRAWING NO. SV1502
SCALE AS SHOWN
SHEET NO. 3 OF 9

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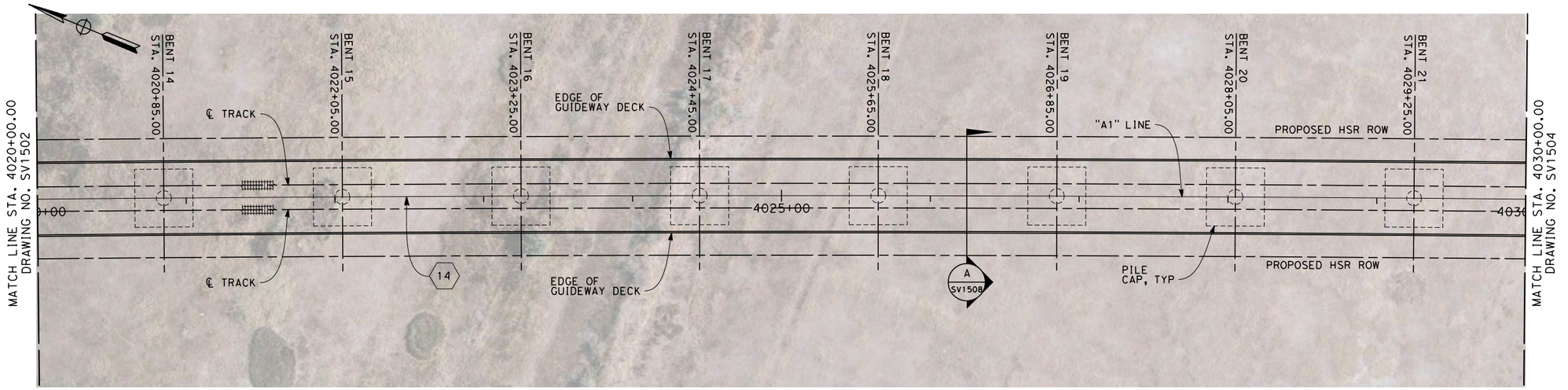
TOP OF RAIL "A1" LINE

NO SCALE



ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

1. STRUCTURE APPROACH SLAB
2. RETAINING WALL

* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

14

R = 50500.0'
Δ = 24° 16' 19.0"
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40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

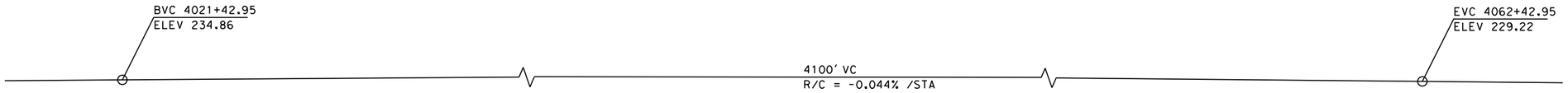
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

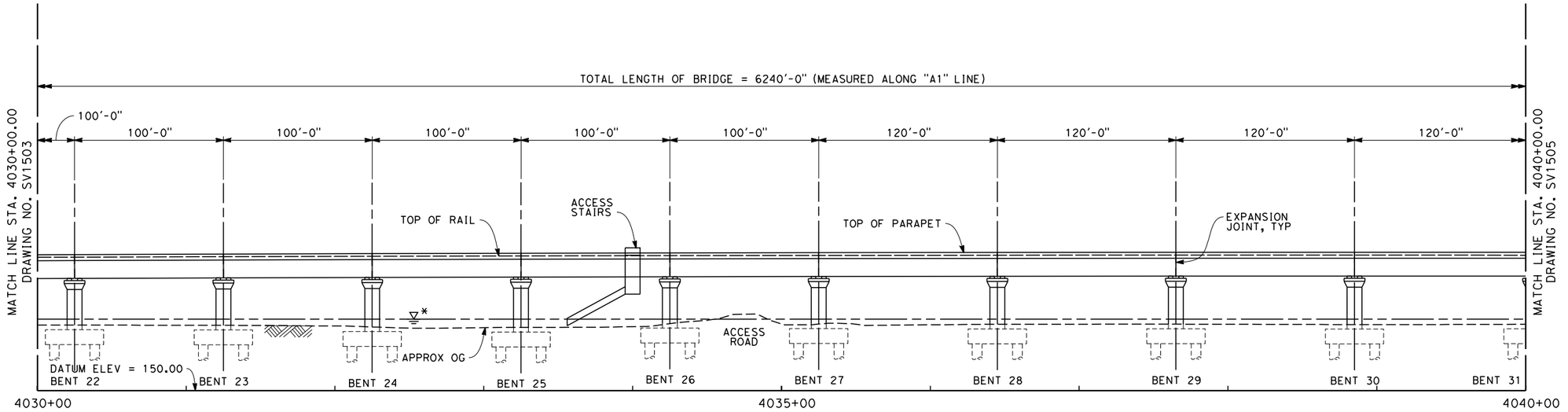
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1503
SCALE AS SHOWN
SHEET NO. 4 OF 9

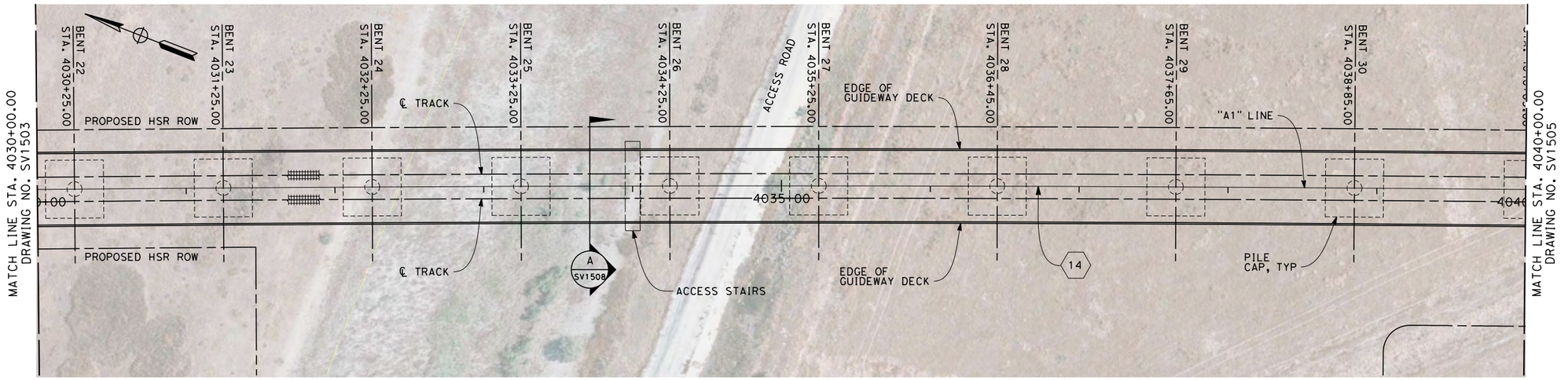
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TOP OF RAIL "A1" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
- (1) STRUCTURE APPROACH SLAB
- (2) RETAINING WALL
- * ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

(14)

R = 50500.0'
Δ = 24° 16' 19.0"
T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

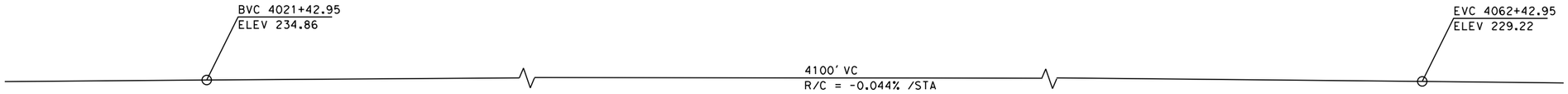
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

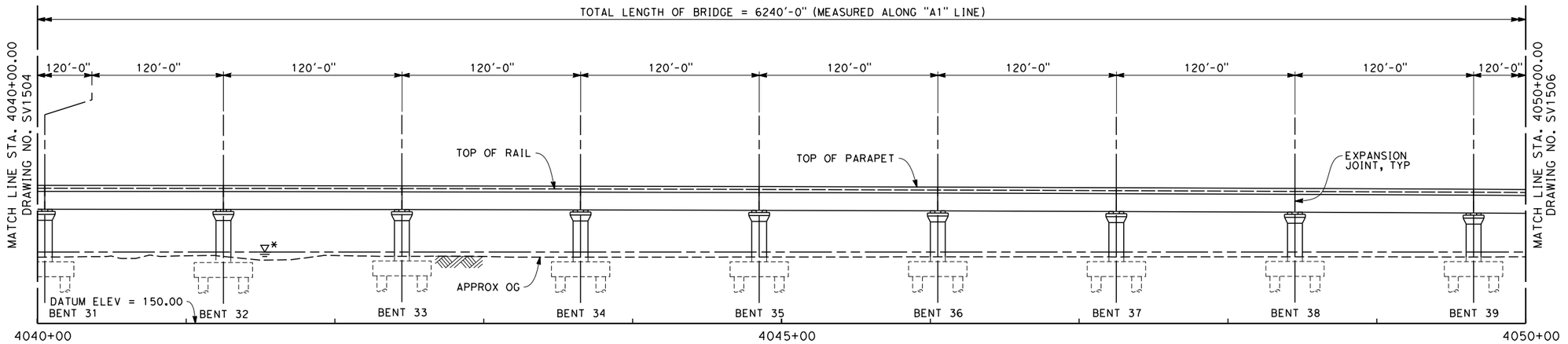
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1504
SCALE AS SHOWN
SHEET NO. 5 OF 9

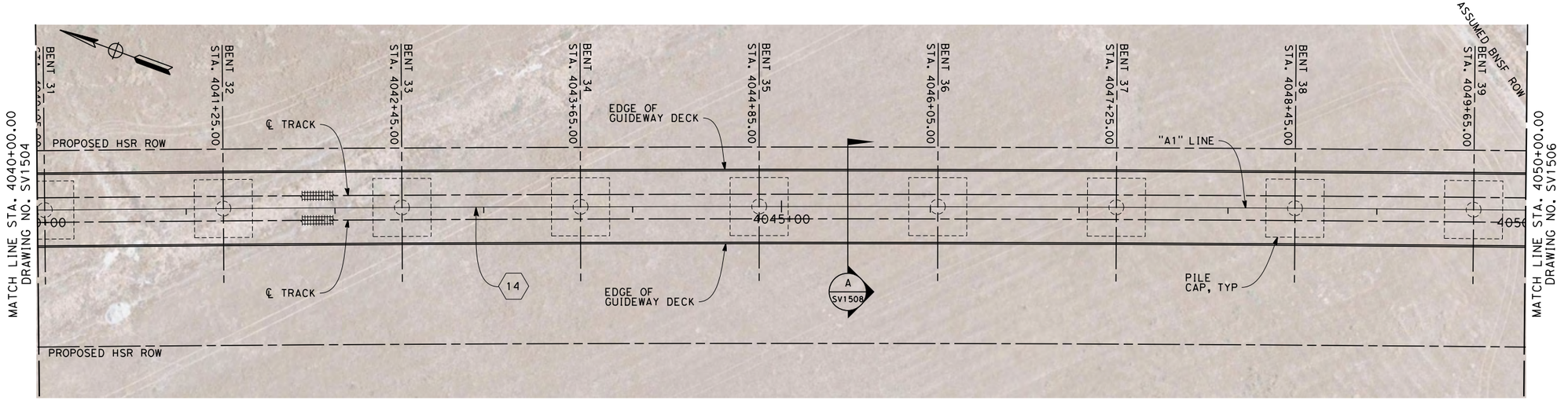
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TOP OF RAIL "A1" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
14
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T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

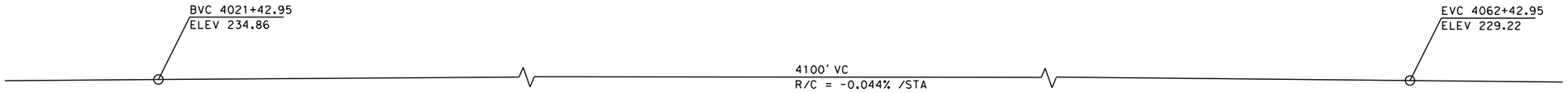
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

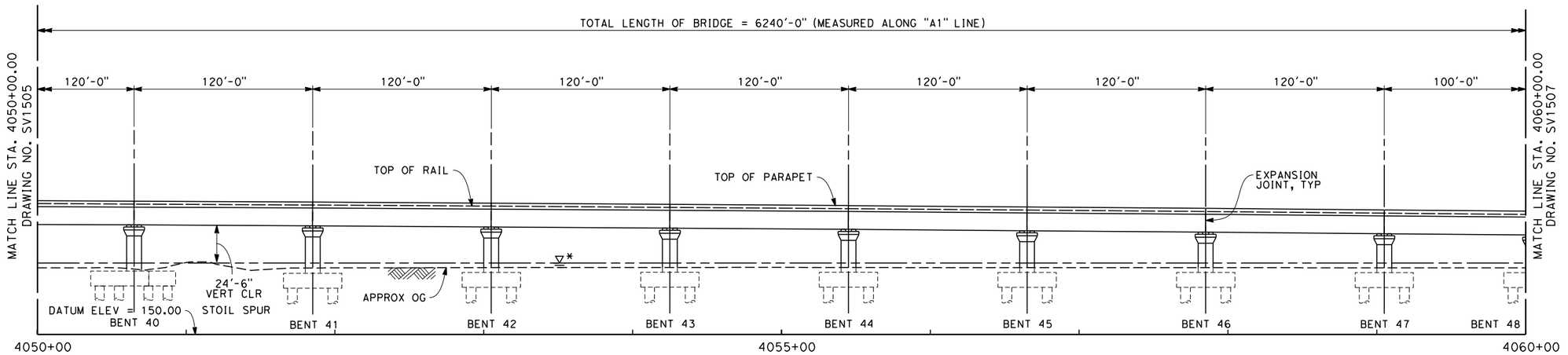
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1505
SCALE AS SHOWN
SHEET NO. 6 OF 9

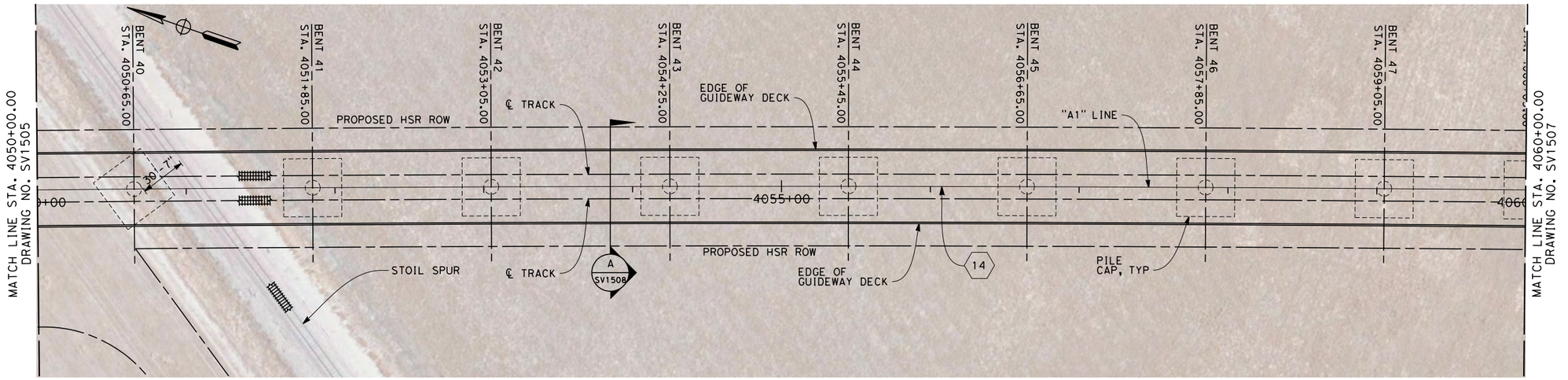
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TOP OF RAIL "A1" LINE
NO SCALE



ELEVATION
SCALE 1" = 40'



PLAN
SCALE 1" = 40'

NOTES
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
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5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:
1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA
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Δ = 24° 16' 19.0"
T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

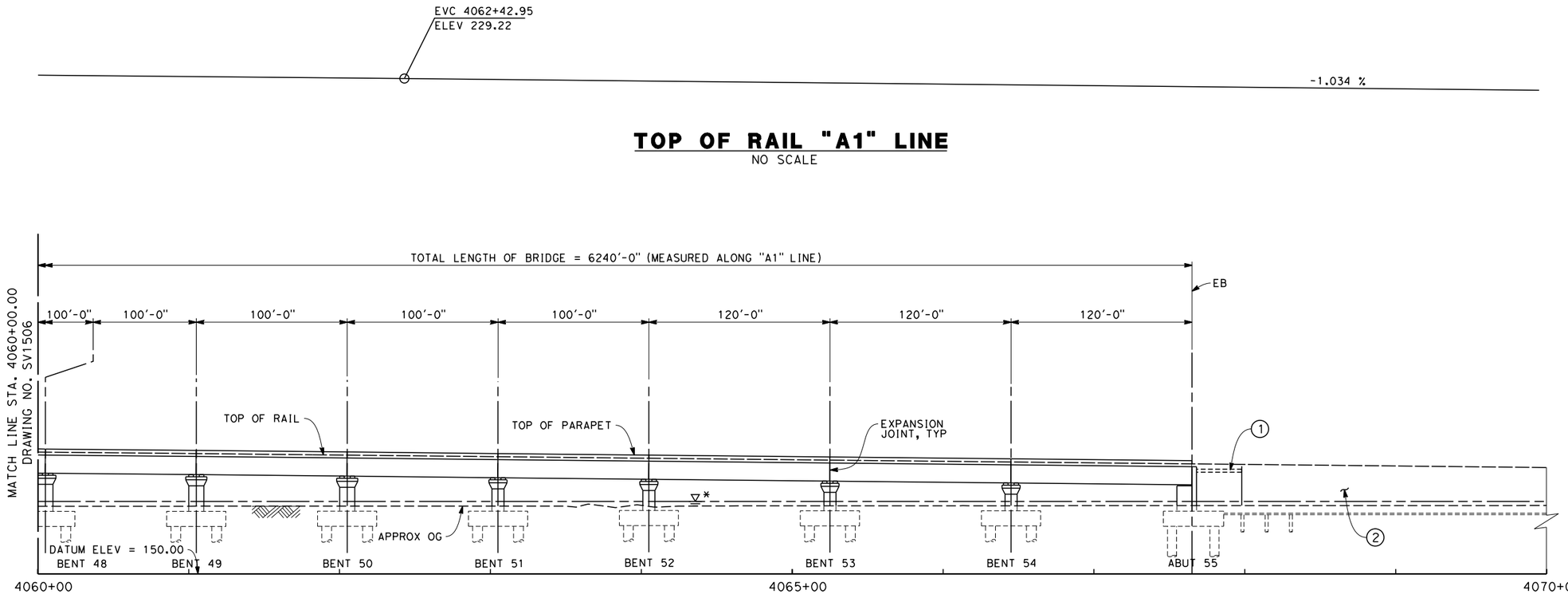
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1506
SCALE AS SHOWN
SHEET NO. 7 OF 9

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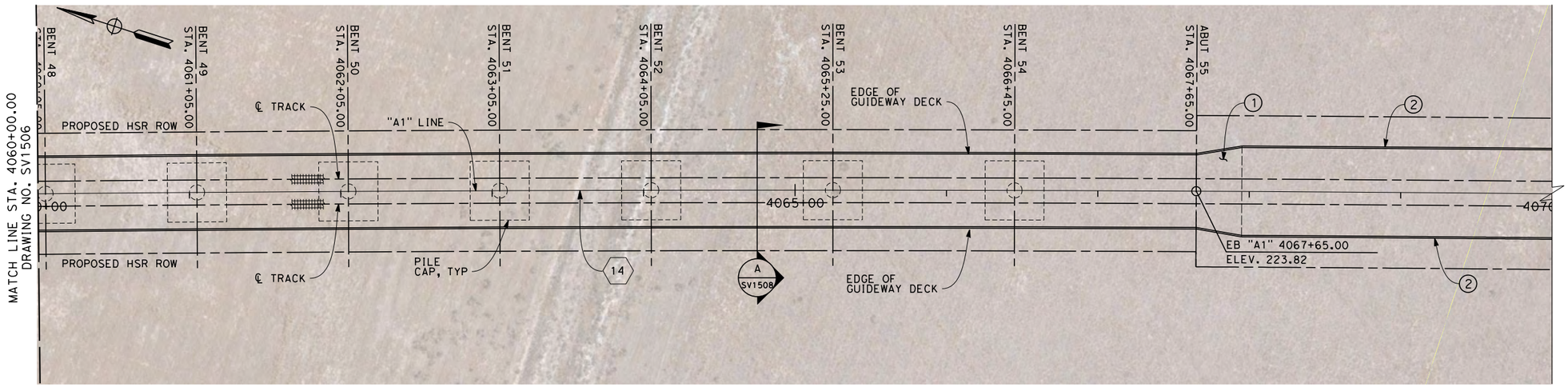


TOP OF RAIL "A1" LINE

NO SCALE

ELEVATION

SCALE 1" = 40'



PLAN

SCALE 1" = 40'

NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
   SIMPLE SPANS - MSS OR FLPM
   CONTINUOUS SPANS - BCC - PRECAST IN-SITU
   STEEL TRUSS - INSITU, SLID OR LAUNCHED
   ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

LEGEND:

1. STRUCTURE APPROACH SLAB
2. RETAINING WALL
- * ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

CURVE DATA

14

R = 50500.0'
Δ = 24° 16' 19.0""
T = 10859.4'
L = 21393.1'

40 0 40 80
1"=40'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. FISHER
DRAWN BY F. PALERMO
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

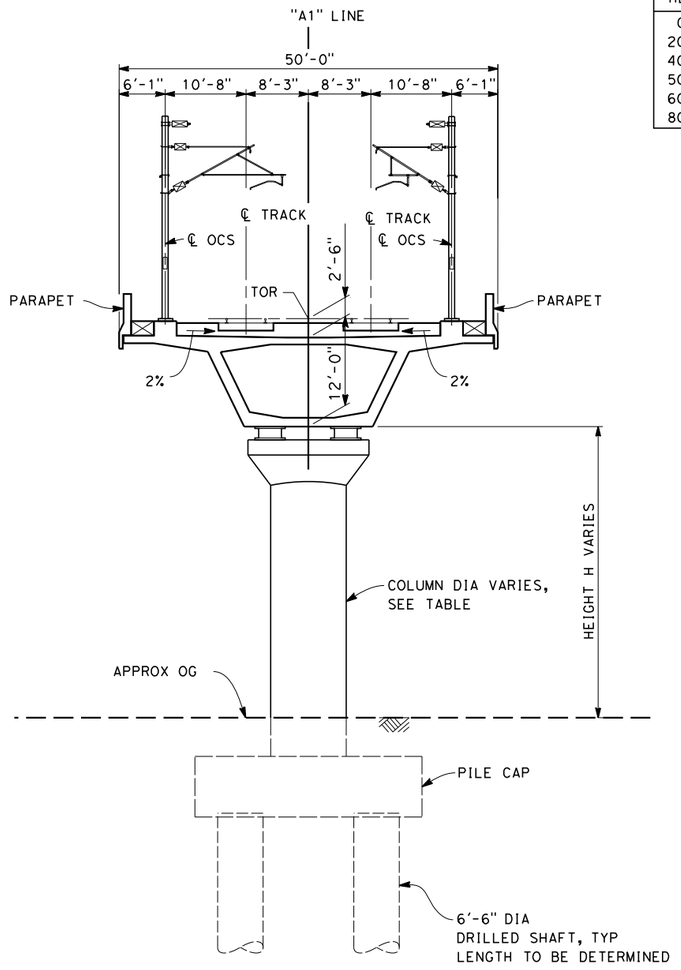
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
PLAN AND ELEVATION

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1507
SCALE AS SHOWN
SHEET NO. 8 OF 9

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COLUMN DIAMETERS	
COLUMN HEIGHT	DIAMETER
0-80	8 FT
20-40	10 FT
40-50	12 FT
50-60	15 FT
60-80	20 FT
80-100	25 FT



SECTION A

SCALE: 1" = 10'

STA 4005+25 THROUGH 4067+65

10 0 10 20

1"-10'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY Y. REN
DRAWN BY J. REILLY
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
DEER CREEK VIADUCT
TYPICAL SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. SV1508
SCALE AS SHOWN
SHEET NO. 9 OF 9

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CALIFORNIA HIGH-SPEED TRAIN

Roadway and Grade Separation Plans



RECORD SET 15% DESIGN SUBMISSION

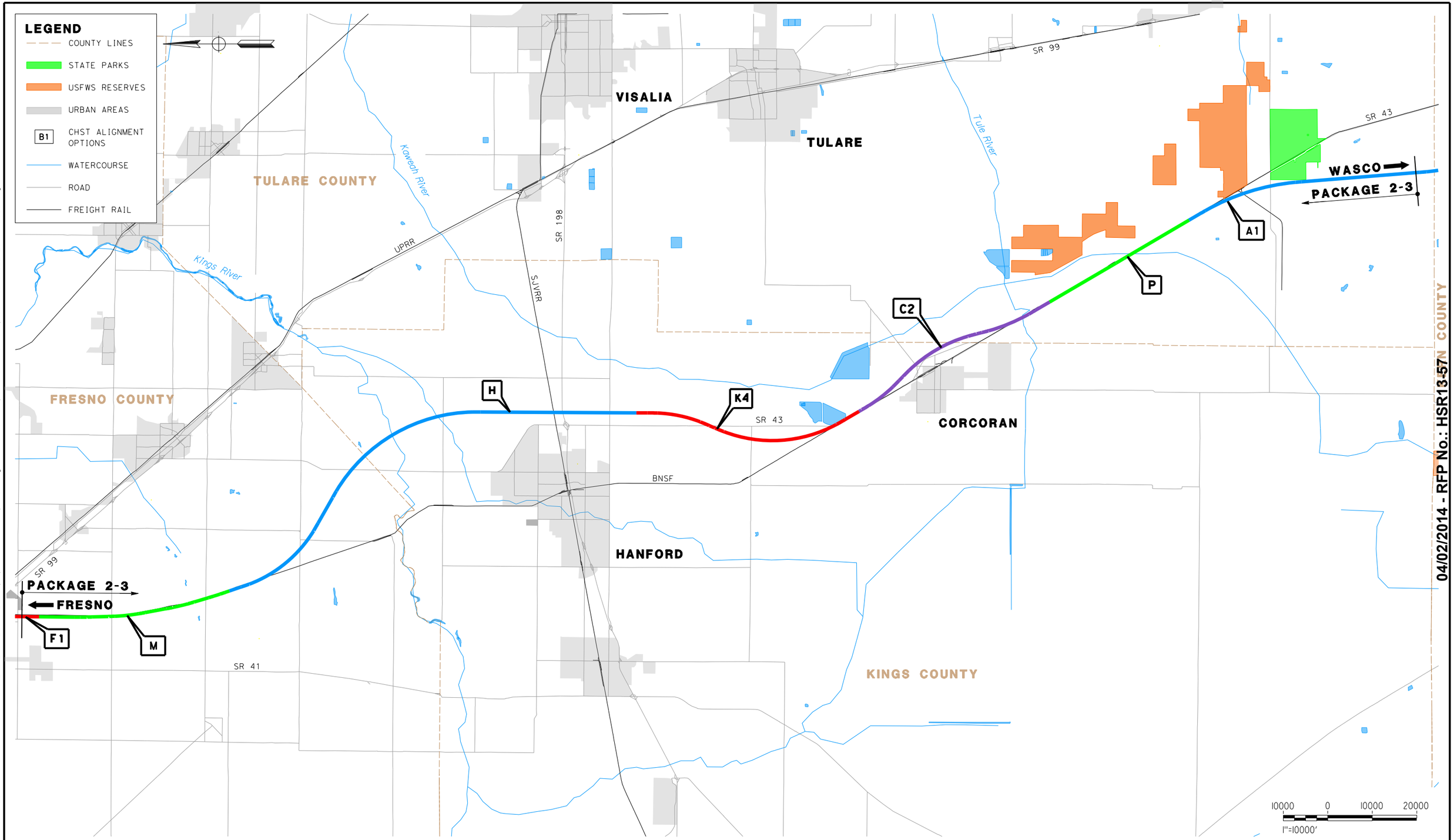
Fresno to Bakersfield

Plans and Profiles and Cross Sections

December 2013

CALIFORNIA High-Speed Rail Authority

04/02/2014 - RFP No.: HSR13-57



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paul.tonkin

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PACKAGE 2-3
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. TT-B0001
SCALE AS SHOWN
SHEET NO. 1 OF 6

GENERAL SHEETS

DRAWING No	DRAWING DESCRIPTION	SHEET No
TT-B0001	ALIGNMENT - LOCATION MAP	1 OF 6
GE-A0021	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS	2 OF 6
GE-A0022	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS	3 OF 6
GE-A0023	ROADWAY & GRADE SEPARATION - INDEX OF SHEETS	4 OF 6
CB0010	GENERAL - ABBREVIATIONS & LEGENDS	5 OF 6
CB0011	GENERAL - ABBREVIATIONS & LEGENDS	6 OF 6

ALIGNMENT M - MONMOUTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0050	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 32
CT1101	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E LINCOLN AVE	2 OF 32
CT1103	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E ADAMS AVE	3 OF 32
CT1104	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E SOUTH AVE	4 OF 32
CT1106	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E MANNING AVE	5 OF 32
CT1107	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E MANNING AVE	6 OF 32
CT1109	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E FLORAL AVE	7 OF 32
CT1110	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E FLORAL AVE	8 OF 32
CT1111	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E NEBRASKA AVE	9 OF 32
CT1112	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E NEBRASKA AVE	10 OF 32
CT1113	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E MOUNTAIN VIEW AVE	11 OF 32
CT1114	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION LAYOUT - E MOUNTAIN VIEW AVE	12 OF 32
CT1115	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY LAYOUT - S CHESTNUT AVE (NORTH)	13 OF 32
CT1116	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY LAYOUT - S CHESTNUT AVE (SOUTH)	14 OF 32
CT2101	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E LINCOLN AVE AND S MAPLE AT E LINCOLN AVE	15 OF 32
CT2102	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY PROFILE - S CEDAR AND S MAPLE AT E ADAMS	16 OF 32
CT2103	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E ADAMS AVE	17 OF 32
CT2104	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E SOUTH AVE AND S CEDAR AT E SOUTH AVE	18 OF 32
CT2105	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY PROFILE - S MAPLE AT E MANNING	19 OF 32
CT2106	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E MANNING AVE	20 OF 32
CT2107	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E MANNING AVE	21 OF 32
CT2108	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E FLORAL AVE	22 OF 32
CT2109	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E FLORAL AVE	23 OF 32
CT2110	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E NEBRASKA AVE	24 OF 32
CT2111	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E NEBRASKA AVE	25 OF 32
CT2112	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY PROFILE - S CHESTNUT AT E NEBRASKA AVE	26 OF 32
CT2113	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E MOUNTAIN VIEW AVE	27 OF 32
CT2114	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - E MOUNTAIN VIEW AVE	28 OF 32
CT2115	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - S CHESTNUT AVE (NORTH)	29 OF 32
CT2116	MONMOUTH SUBSECTION - ALIGNMENT M - GRADE SEPARATION PROFILE - S CHESTNUT AVE (SOUTH)	30 OF 32
CT3010	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	31 OF 32
CT3011	MONMOUTH SUBSECTION - ALIGNMENT M - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	32 OF 32

ALIGNMENT H - HANFORD SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0055	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 60
CT1117	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CLOVIS AVE	2 OF 60
CT1118	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S CLOVIS AVE	3 OF 60
CT1119	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E ELKHORN AVE	4 OF 60
CT1120	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E ELKHORN AVE	5 OF 60
CT1121	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S FOWLER AVE	6 OF 60
CT1122	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - S FOWLER AVE	7 OF 60
CT1123	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E DAVIS AVE	8 OF 60
CT1124	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - E DAVIS AVE	9 OF 60
CT1130	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - DOVER AVE	10 OF 60
CT1131	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - DOVER AVE	11 OF 60
CT1132	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - 8TH AVE (NORTH)	12 OF 60
CT1133	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - 8TH AVE (SOUTH)	13 OF 60
CT1134	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - EXCELSIOR AVE	14 OF 60
CT1135	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - EXCELSIOR AVE	15 OF 60
CT1136	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - ELDER AVE	16 OF 60
CT1137	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - ELDER AVE	17 OF 60
CT1138	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FLINT AVE	18 OF 60
CT1139	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FLINT AVE	19 OF 60
CT1140	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FARGO AVE	20 OF 60
CT1141	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - FARGO AVE	21 OF 60
CT1144	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HANFORD ARMONA RD	22 OF 60
CT1145	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HANFORD ARMONA RD	23 OF 60
CT1146	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HOUSTON AVE	24 OF 60
CT1147	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - HOUSTON AVE	25 OF 60
CT1148	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - IONA AVE	26 OF 60
CT1149	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION LAYOUT - IONA AVE	27 OF 60
CT2117	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - S CLOVIS AVE	28 OF 60
CT2118	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - S CLOVIS AVE	29 OF 60
CT2119	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - E ELKHORN AVE	30 OF 60
CT2120	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - E ELKHORN AVE	31 OF 60
CT2121	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - S FOWLER AVE	32 OF 60
CT2122	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - S FOWLER AVE	33 OF 60
CT2123	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - E DAVIS AVE	34 OF 60
CT2124	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - E DAVIS AVE	35 OF 60
CT2130	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - DOVER AVE	36 OF 60
CT2131	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - DOVER AVE	37 OF 60
CT2132	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - 8TH AVE (NORTH)	38 OF 60
CT2133	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - 8TH AVE (SOUTH)	39 OF 60
CT2134	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - EXCELSIOR AVE	40 OF 60
CT2135	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - EXCELSIOR AVE	41 OF 60
CT2136	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - ELDER AVE	42 OF 60
CT2137	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - ELDER AVE	43 OF 60
CT2138	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - FLINT AVE	44 OF 60
CT2139	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - FLINT AVE	45 OF 60
CT2140	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - FARGO AVE	46 OF 60
CT2141	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - FARGO AVE	47 OF 60
CT2142	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - 7 1/2 AVE CONNECTOR	48 OF 60
CT2143	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - 7 1/2 AVE	49 OF 60
CT2144	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - HANFORD ARMONA RD	50 OF 60

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IN CHARGE R. COFFIN
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ROADWAY & GRADE SEPARATION
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CONTRACT NO. HSR 06-0003
DRAWING NO. GE-A0021
SCALE NO SCALE
SHEET NO. 2 OF 6

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ALIGNMENT H - HANFORD SUBSECTION, CONT'D

DRAWING No	DRAWING DESCRIPTION	SHEET No
CT2145	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - HANFORD ARMONA RD	51 OF 60
CT2146	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - HOUSTON AVE	52 OF 60
CT2147	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - HOUSTON AVE	53 OF 60
CT2148	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - IONA AVE	54 OF 60
CT2149	HANFORD SUBSECTION - ALIGNMENT H - GRADE SEPARATION PROFILE - IONA AVE	55 OF 60
CR1251	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY LAYOUT - E CLARKSON AVE & S MINNEWAWA AVE	56 OF 60
CR2251	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY PROFILE - E CLARKSON AVE & S MINNEWAWA AVE	57 OF 60
CR2252	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY PROFILE - E CLARKSON AVE & S MINNEWAWA AVE	58 OF 60
CT3030	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	59 OF 60
CT3031	HANFORD SUBSECTION - ALIGNMENT H - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	60 OF 60

ALIGNMENT K4 - KAWEAH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0065	KAWEAH SUBSECTION - ALIGNMENT K4 - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 23
CT1220	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - IDAHO AVE	2 OF 23
CT1221	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - IDAHO AVE	3 OF 23
CT1222	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - JACKSON AVE	4 OF 23
CT1223	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - JACKSON AVE	5 OF 23
CT1224	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (JERSEY AVE)	6 OF 23
CT1225	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - STATE ROUTE 43 (JERSEY AVE)	7 OF 23
CT1226	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - KENT AVE	8 OF 23
CT1227	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - KENT AVE	9 OF 23
CT1228	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - KANSAS AVE	10 OF 23
CT1229	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION LAYOUT - KANSAS AVE	11 OF 23
CT2220	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - IDAHO AVE	12 OF 23
CT2221	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - IDAHO AVE	13 OF 23
CT2222	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - JACKSON AVE	14 OF 23
CT2223	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - JACKSON AVE	15 OF 23
CT2224	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - STATE ROUTE 43 (JERSEY AVE)	16 OF 23
CT2225	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEP PROFILE & SUPERELEVATION DIAGRAM - STATE ROUTE 43 (JERSEY AVE)	17 OF 23
CT2226	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - KENT AVE	18 OF 23
CT2227	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - KENT AVE	19 OF 23
CT2228	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - KANSAS AVE	20 OF 23
CT2229	KAWEAH SUBSECTION - ALIGNMENT K4 - GRADE SEPARATION PROFILE - KANSAS AVE	21 OF 23
CT3230	KAWEAH SUBSECTION - ALIGNMENT K4 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	22 OF 23
CT3231	KAWEAH SUBSECTION - ALIGNMENT K4 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	23 OF 23

ALIGNMENT C2 - CORCORAN SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0075	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 18
CT1239	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - NEVADA AVE	2 OF 18
CT1240	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - NEVADA AVE CONNECTOR	3 OF 18
CT1244	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - CORCORAN HWY	4 OF 18
CT1248	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION LAYOUT - WHITLEY AVE/ STATE ROUTE 137	5 OF 18
CT2239	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE - NEVADA AVE	6 OF 18
CT2240	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE - NEVADA AVE	7 OF 18
CT2244	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE - CORCORAN HWY	8 OF 18
CT2245	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE - CORCORAN HWY	9 OF 18
CT2246	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE - 5TH AVE	10 OF 18
CT2247	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE	11 OF 18
CT2248	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - GRADE SEPARATION PROFILE	12 OF 18
CR1230	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY LAYOUT	13 OF 18
CR1231	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY LAYOUT	14 OF 18
CT3042	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION	17 OF 18
CT3043	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - ROADWAY/GRADE SEPARATION	18 OF 18

ALIGNMENT P - PIXLEY SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0100	PIXLEY SUBSECTION - ALIGNMENT P - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 16
CT1401	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 128	2 OF 16
CT1411	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - HESSE AVE	3 OF 16
CT1421	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 112	4 OF 16
CT1431	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION LAYOUT - AVE 88	5 OF 16
CT2401	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 128	6 OF 16
CT2402	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 128	7 OF 16
CT2411	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - HESSE AVE	8 OF 16
CT2412	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - HESSE AVE	9 OF 16
CT2421	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 112	10 OF 16
CT2422	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 112	11 OF 16
CT2423	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 112 CONNECTOR	12 OF 16
CT2431	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 88	13 OF 16
CT2432	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 88	14 OF 16
CT2433	PIXLEY SUBSECTION - ALIGNMENT P - GRADE SEPARATION PROFILE - AVE 88 CONNECTOR	15 OF 16
CT3060	PIXLEY SUBSECTION - ALIGNMENT P - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	16 OF 16

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DRAWING NO. GE-A0022
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ALIGNMENT A1 - ALLENSWORTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
CB0110	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - ROADWAY/GRADE SEPARATION - KEY MAP	1 OF 24
CT1501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - COUNTY RD J22	2 OF 24
~~CT1511~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - GARCES HWY~~	~~3 OF 24~~
~~CT1512~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - SCOFIELD AVE~~	~~4 OF 24~~
~~CT1513~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - SCOFIELD AVE~~	~~5 OF 24~~
~~CT1514~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - SCOFIELD AVE~~	~~6 OF 24~~
~~CT1521~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - POND RD~~	~~7 OF 24~~
~~CT1522~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - POND RD~~	~~8 OF 24~~
~~CT1523~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - MAGNOLIA AVE~~	~~9 OF 24~~
~~CT1531~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - PETERSON RD~~	~~10 OF 24~~
~~CT1532~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION LAYOUT - PETERSON RD~~	~~11 OF 24~~
CT2501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - COUNTY RD J22	12 OF 24
~~CT2510~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - GARCES HWY~~	~~13 OF 24~~
~~CT2511~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - GARCES HWY~~	~~14 OF 24~~
~~CT2512~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - SCOFIELD AVE~~	~~15 OF 24~~
~~CT2513~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - SCOFIELD AVE~~	~~16 OF 24~~
~~CT2514~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - SCOFIELD AVE~~	~~17 OF 24~~
~~CT2521~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - POND RD~~	~~18 OF 24~~
~~CT2522~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - POND RD~~	~~19 OF 24~~
~~CT2523~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - MAGNOLIA AVE~~	~~20 OF 24~~
~~CT2531~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - PETERSON RD~~	~~22 OF 24~~
~~CT2532~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - GRADE SEPARATION PROFILE - PETERSON RD~~	~~23 OF 24~~
CT3070	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - ROADWAY/GRADE SEPARATION - TYPICAL CROSS SECTIONS	24 OF 24

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A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BNSF	BURLINGTON NORTH & SANTA FE
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CLEARANCE POINT
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD
CULV	CULVERT
℄	CENTERLINE

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXWY	EXPRESSWAY
EXT	EXTERIOR

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY
FPLM	FULL SPAN PRECAST LAUNCHING METHOD

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HR	HOUR
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HS	HIGH STRENGTH
HST	HIGH SPEED TRAIN
HSR	HIGH SPEED RAIL
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LCB	LEAN CONCRETE BASE
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LC	LENGTH OF CURVE
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL
MSS	MOVING SCAFFOLDING SYSTEM

N

N	NORTH, NORTHING
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
N/A	NOT APPLICABLE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
℄,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

RFP No.: HSR13-57

04/02/2014

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0010
SCALE NO SCALE
SHEET NO. 5 OF 6

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Paul.Tonkin

P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
R/W, ROW	RIGHT OF WAY
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
S	STATION LINE
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES
SJVR	SAN JOAQUIN VALLEY RAILROAD

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TM	TECHNICAL MEMORANDUM
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
TS	TRAFFIC SIGNAL, TUBULAR STEEL, TANGET TO SPIRAL
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

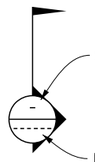
X

X SEC	CROSS SECTION
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

LEGEND



-E- PROPOSED ELECTRICITY LINE

-e- EXISTING ELECTRICITY LINE

-E-(OH)- EXISTING OVERHEAD ELECTRICITY LINE

-E-(OH)- PROPOSED OVERHEAD ELECTRICTY LINE

PROPOSED HST RIGHT OF WAY

PROPOSED HST TRACK CENTERLINE

RETAINING WALL

TOE OF SLOPE / TOP OF CUT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

OR TRACK (PLAN AND ELEVATION)

REL TRACK TO BE REMOVED AND RELOCATED PER BNSF

REMOVE BASE & SURFACING

SOUND BARRIER (POTENTIAL)

DIRECTION OF FLOW

WATER SURFACE

GENERAL NOTES

1. TRACK PROFILE IS DESIGNED AS TOP OF THE LOW RAIL. VERTICAL CLEARANCE REQUIREMENTS ARE MEASURED FROM THE TOP OF THE HIGH RAIL ON SUPERELEVATED TRACK. THE CLEARANCE ENVELOPES SHOWN DEMONSTRATE THE MINIMUM CLEARANCE REQUIREMENTS.

2. MINIMUM VERTICAL CLEARANCE REQUIREMENTS TO CANALS AND DITCHES ARE NOT KNOWN. FURTHER CONSULTATION WITH THE WATERCOURSE OWNERS WILL BE REQUIRED TO DETERMINE NECESSARY CLEARANCES.

3. THE FOLLOWING ARE ROADWAY DESIGN STANDARDS AND GUIDELINES:
   A. CALTRANS HIGHWAY DESIGN MANUAL (2012)
   B. AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011)
   C. AASHTO ROADSIDE DESIGN GUIDE (2011)
   D. APPLICABLE LOCAL DESIGN STANDARD AND GUIDELINES (I.E., CITY OF FRESNO)

4. THE FEMA FLOODPLAIN BOUNDARIES ARE CALLED OUT AS "LIMIT OF 100YR FEMA FLOODPLAIN". THE LIMITS OF THE MODELED 100 YEAR WATER SURFACE ELEVATIONS (WSE) ARE APPROXIMATE AND ARE MARKED WITH THE NAME OF THE WATERBODY ASSOCIATED WITH THE MODELED FLOODING, E.G. "LIMIT OF POSO CREEK FLOODPLAIN".

5. THE STRUCTURE DESIGN ASSUMES THAT THE DEPTH FROM TOR TO TOP OF DECK IS 2'-6" THROUGHOUT. HOWEVER, WHERE BALLASTED TRACK FORM IS USED, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-9" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE, AND PROTECTION LAYER IF REQUIRED. FOR SLAB TRACKFORM, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-6" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE AND PROTECTION LAYER IF REQUIRED.

6. WHERE THE VERTICAL ALIGNMENT GRADE IS LESS THAN 0.5% THE UPPER SURFACE OF THE VIADUCT STRUCTURE SHALL BE PROFILED TO GIVE A MINIMUM LONGITUDINAL FALL OF 0.5%. TYPICALLY FOR A SPAN OF 120'-00" ON A 0% GRADE SECTION OF VIADUCT THIS COULD BE ACHIEVED BY MODIFYING THE CROSS SLOPE OF THE GIRDER LINEARLY BETWEEN 0.8% AT MID-SPAN TO 2% AT EACH END.

7. WHEN LATERAL SEPARATION BETWEEN THE CONVENTIONAL RAILROAD AND HST SYSTEM IS LESS THAN 102', A SITE SPECIFIC HAZARD ANALYSIS WILL BE CONDUCTED TO DETERMINE WHAT SPECIFIC COLLISION PROTECTION MEASURES MAY NEED TO BE IMPLEMENTED.

8. RIP-RAP PROTECTION IS REQUIRED FOR EMBANKMENTS WITHIN FEMA SPECIAL FLOOD HAZARD ZONES, IN ACCORDANCE WITH DESIGN CRITERIA.

9. HST ALIGNMENT CONTROL LINE IS DESIGNED AS THE CENTERLINE BETWEEN THE TWO MAINLINE TRACKS.

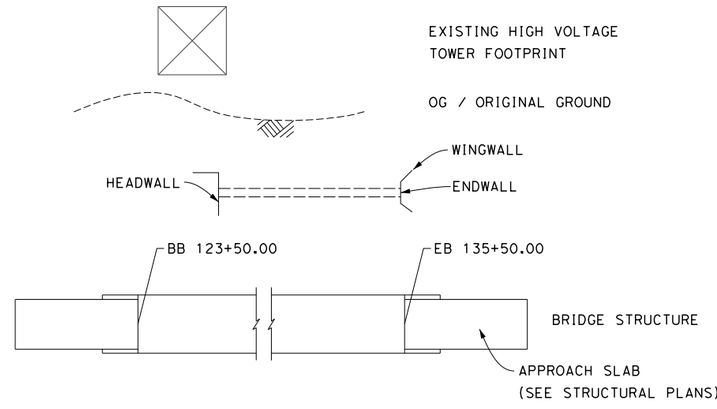
10. TRACK FORM USED IN TYPICAL SECTIONS IS INDICATIVE.

DIRECTION OF TRAFFIC

POINT OF MINIMUM VERTICAL CLEARANCE
ROAD CLOSURE (ROADWAYS)

[1] LINE DATA

(1) (3) CURVE DATA (ALIGNMENTS)
CURVE DATA (STRUCTURES)



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

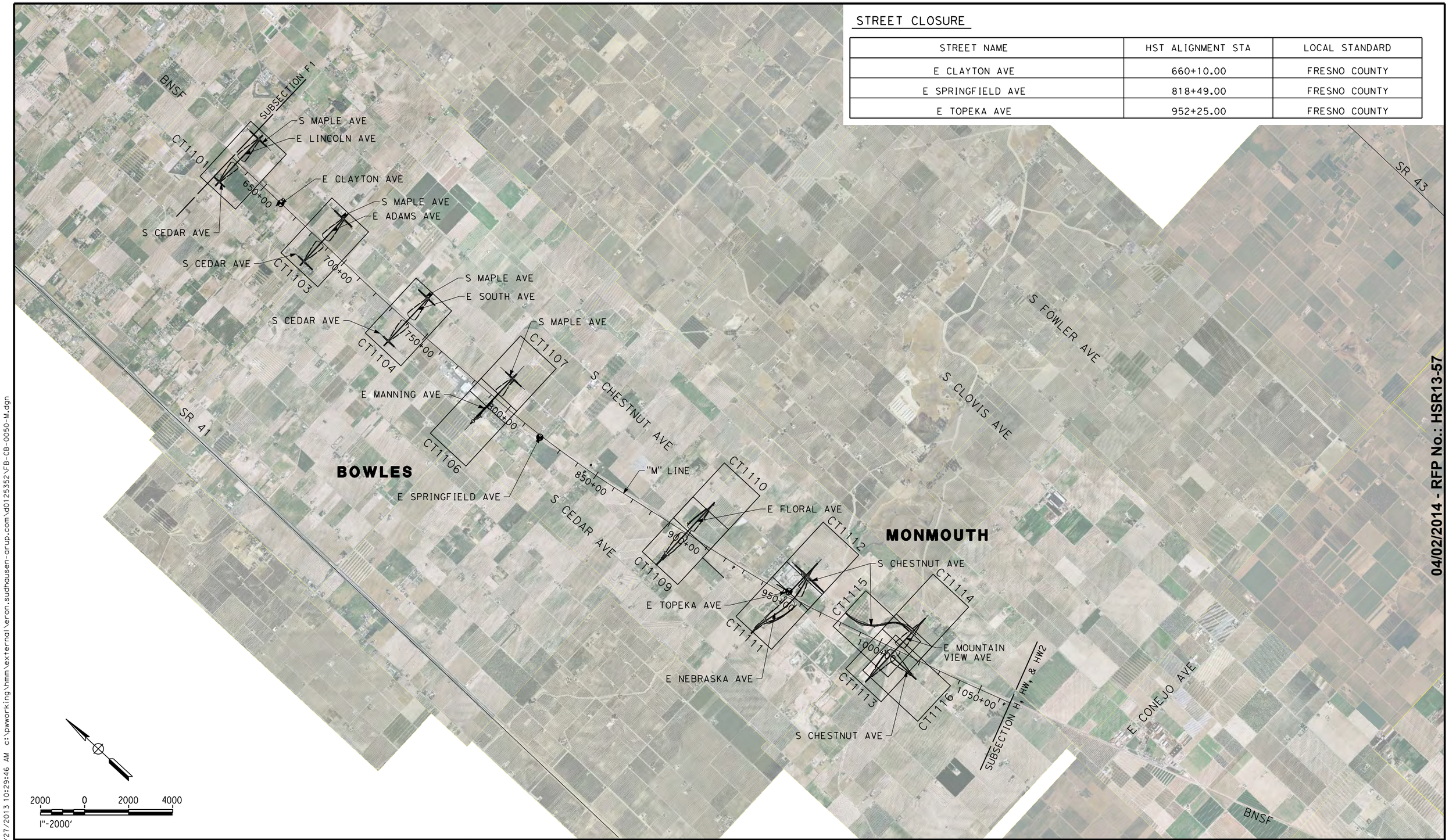
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0011
SCALE NO SCALE
SHEET NO. 6 OF 6

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STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
E CLAYTON AVE	660+10.00	FRESNO COUNTY
E SPRINGFIELD AVE	818+49.00	FRESNO COUNTY
E TOPEKA AVE	952+25.00	FRESNO COUNTY



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0050
SCALE AS SHOWN
SHEET NO. 1 OF 32

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°49'15"E	3200.00'
2	S00°30'40"W	1500.00'
3	S00°32'51"W	650.00'

"F1" LINE
BNSF
"M" LINE
HST ROW
TIE IN TO SUBSECTION M
END STA 627+07.31 (F1)
START STA 630+25.57 (M)
630+26
635+00
640+00
"FLIM" 0+00.00 PI
"FLIM" LINE
"FLIM" 2+00.00
CONFORM
"FLIM" 7+50.00 PI
"FLIM" 12+50.00
CONFORM
"FLIM" 15+00.00 PI
"FLI" 7+00.00 PI
"FLI" 7+50.00
CONFORM
"FLI" 10+00.00 POT=
"FLIC" 20+00.00 POT
"FLI" 22+08.97 POT=
"M" 633+47.39 POT
"FLI" 36+40.28 POT=
"FLIM" 7+50.00 POT
"FLI" 39+00.00 PI
CONFORM
"FLIC" 17+00.00
CONFORM
"FLIC" LINE
"FLIC" 23+50.00
CONFORM
E LINCOLN AVE
S CEDAR AVE
S MAPLE AVE
ROADWAY ROW
TOE OF FILL
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
"FLI" LINE
EB
EP
BB
MBGR (TYP)
CONFORM
TCE
R=15'
R=60'
40'
32'
1
2
3
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E LINCOLN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1101
SCALE AS SHOWN
SHEET NO. 2 OF 32

LINE DATA

NO.	BEARING	DISTANCE
1	S89°49'13"E	3200.00'
2	S00°34'00"W	1050.00'
3	S00°26'02"W	1300.00'

S CEDAR AVE
"FADC" 2+50.00 PI
"FADC" 4+00.00 PI
CONFORM
"FAD" 10+01.15 POT=
"FADC" 7+50.00 POT
"FAD" 7+50.00
CONFORM
ROADWAY ROW
R=15'
TCE
TOE OF FILL
R=60'
LIMIT OF DITCH
TOE OF FILL
CONFORM
"FAD" 22+11.85 POT=
"M" 686+26.09 POT
HST ROW
"M" LINE
BNSF
680+00
685+00
690+00
695+00
EP
BB
MBGR (TYP)
"FADC" LINE
DRAINAGE DITCH (TYP)
"FAD" 36+44.64 POT=
"FADM" 7+50.00 POT
EB
40'
"FAD" LINE
E ADAMS AVE
"FADM" 0+00.00 PI
"FADM" LINE CONFORM
"FADM" 2+00.00 CONFORM
"FADM" 13+00.00 PI CONFORM
"FAD" 39+50.00 CONFORM
S MAPLE AVE
32'
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

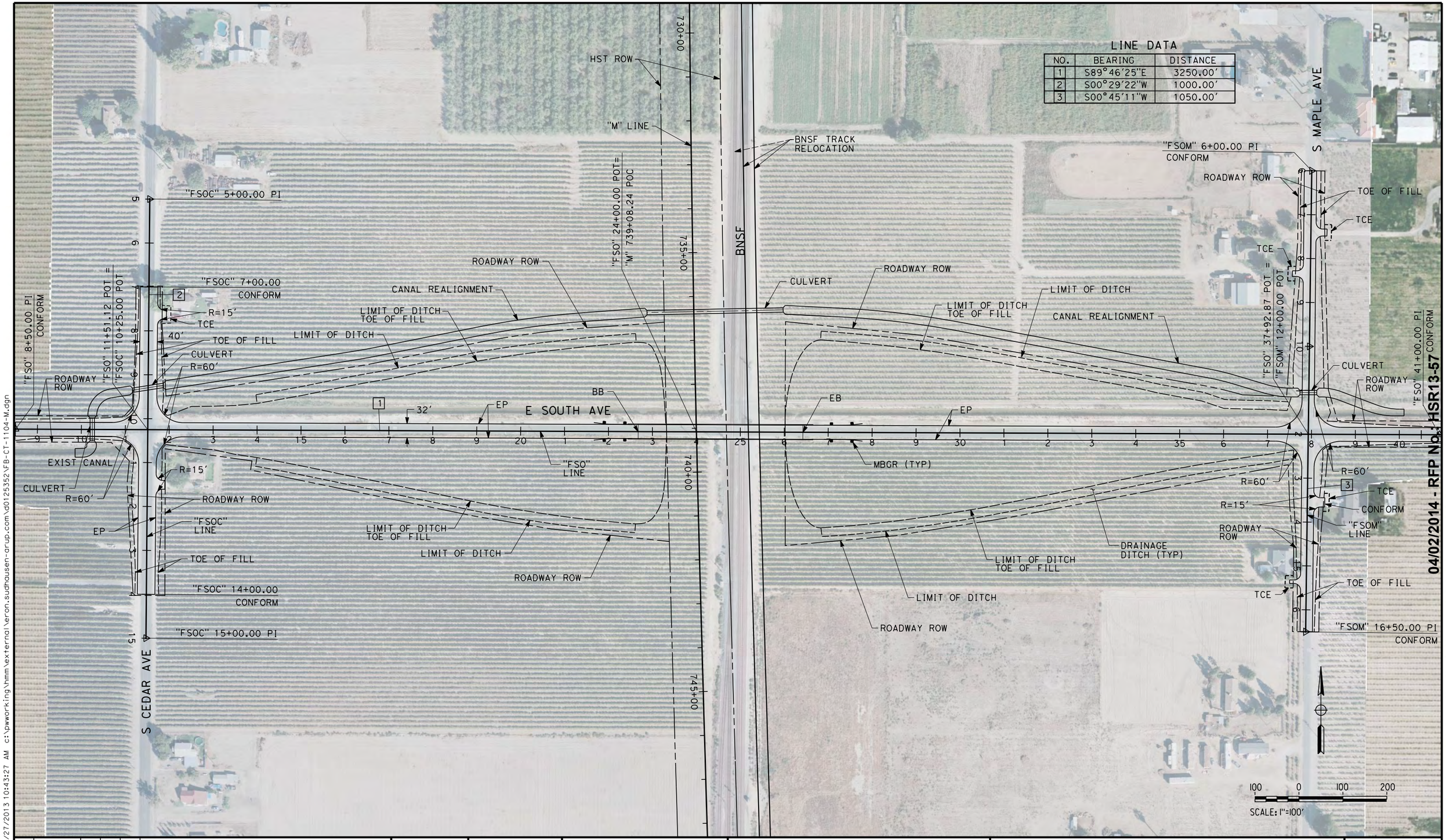
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E ADAMS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1103
SCALE AS SHOWN
SHEET NO. 3 OF 32

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

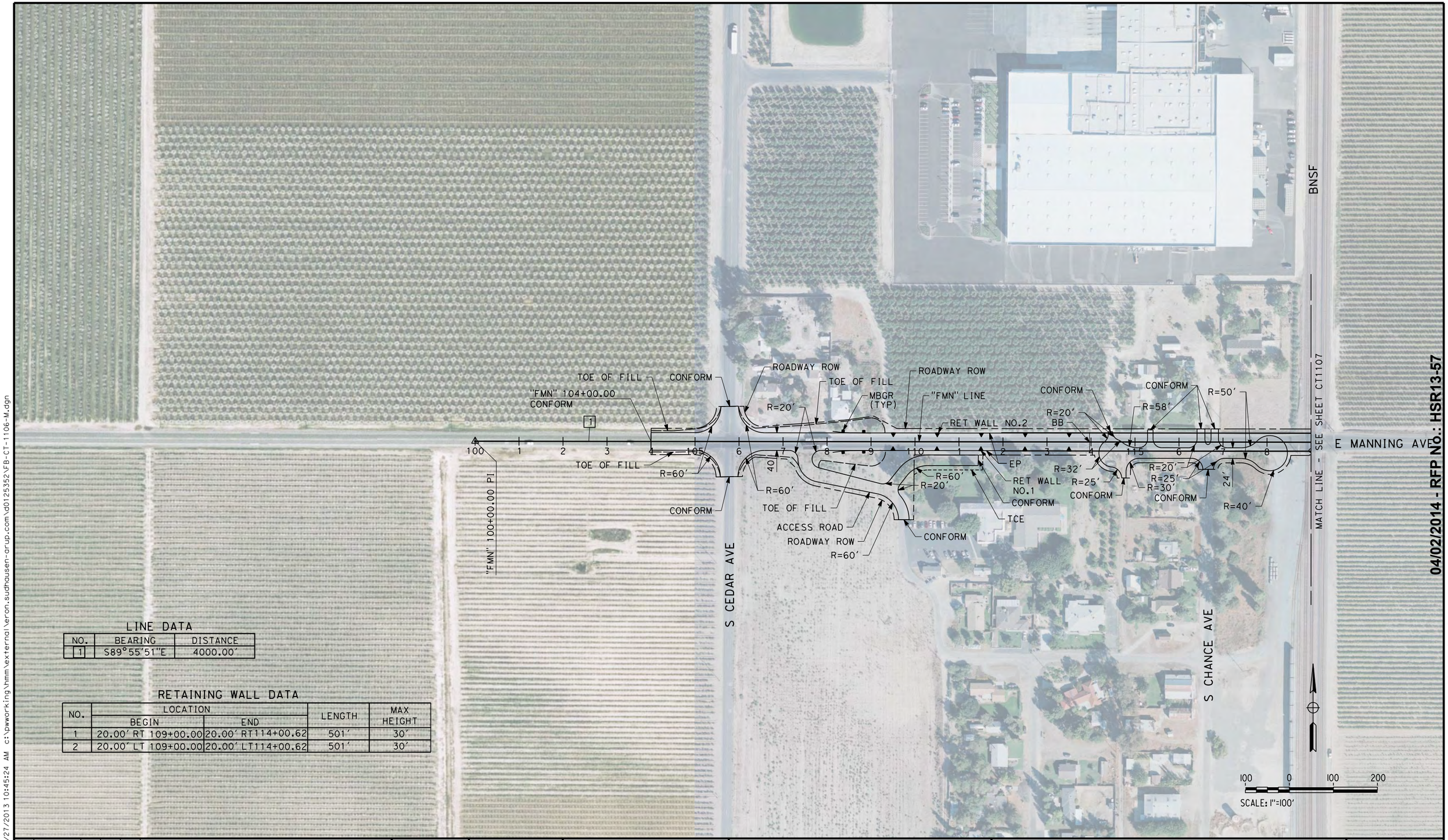
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E SOUTH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1104
SCALE AS SHOWN
SHEET NO. 4 OF 32

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°55'51"E	4000.00'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00' RT 109+00.00	20.00' RT 114+00.62	501'	30'
2	20.00' LT 109+00.00	20.00' LT 114+00.62	501'	30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1106
SCALE AS SHOWN
SHEET NO. 5 OF 32

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°55'51"E	4000.00'
2	S00°19'48"W	1500.00'

HST ROW
"FMM" 0+00.00 PI
785+00
790+00
795+00
800+00
"FMM" 3+00.00
CONFORM
BNSF TRACK RELOCATION
ROADWAY ROW
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
DRAINAGE DITCH (TYP)
TCE
CONFORM
R=15'
"FMM" 7+49.17 POT=
"FMN" 132+17.53 POT
TOE OF FILL
R=60'
ROADWAY ROW
"FMN" 135+00.00
CONFORM
MBGR (TYP)
EB
"FMN" LINE
E MANNING AVE
40'
EP
CONFORM
TOE OF FILL
EP
TOE OF FILL
"FMM" LINE
ROADWAY ROW
"FMN" 140+00.00 PI
TCE
R=60'
R=20'
32'
ACCESS ROAD
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
ROADWAY ROW
ROADWAY ROW
TOE OF FILL
S MAPLE AVE
"FMM" 13+00.00
CONFORM
MATCH LINE - SEE CT1106
ROADWAY ROW
BNSF
"FMN" 120+25.94 POT=
"M" 791+99.94 POC
"M" LINE
"FMM" 15+00.00 PI
100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

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CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1107
SCALE AS SHOWN
SHEET NO. 6 OF 32

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

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URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E FLORAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1109
SCALE AS SHOWN
SHEET NO. 7 OF 32

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°46'40"E	3900.00'

LIMIT OF DITCH
TOE OF FILL
ACCESS ROAD
LIMIT OF DITCH
ROADWAY ROW
R=30'
"FFL" 42+00.00 P.I.
CONFORM
MATCH LINE - SEE CT1109
0 1 2 3 4 35 6 7 8 9 40 1
"FFL" LINE
40'
R=30'
EP
R=15'
CONFORM
TCE
DRAINAGE DITCH (TYP)
ACCESS ROAD
LIMIT OF DITCH
CONFORM
ROADWAY ROW
LIMIT OF DITCH
TOE OF FILL
E FLORAL AVE
S CHESTNUT AVE

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

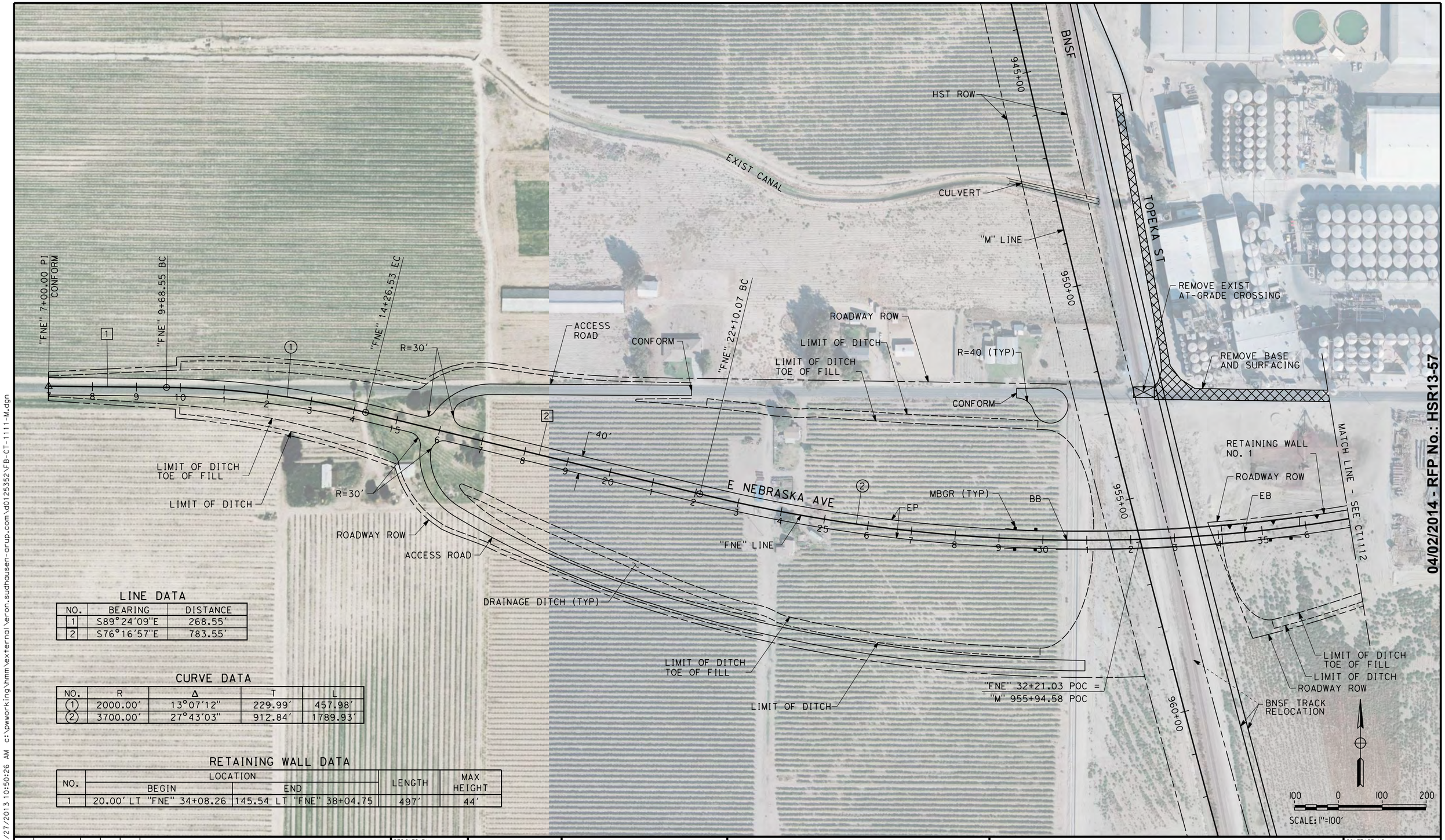
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E FLORAL AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1110
SCALE AS SHOWN
SHEET NO. 8 OF 32



LINE DATA

NO.	BEARING	DISTANCE
1	S89°24'09"E	268.55'
2	S76°16'57"E	783.55'

CURVE DATA

NO.	R	Δ	T	L
(1)	2000.00'	13°07'12"	229.99'	457.98'
(2)	3700.00'	27°43'03"	912.84'	1789.93'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00' LT "FNE" 34+08.26	145.54' LT "FNE" 38+04.75	497'	44'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1111
SCALE AS SHOWN
SHEET NO. 9 OF 32

04/02/2014 - RFP No.: HSR13-57

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"NCN" 12+00.00
CONFORM

S CHESTNUT AVE

"NCN" LINE

"FNE" 40+00.00 EC

"FNE" 45+37.48 BC

"FNE" 50+42.98 EC

"FNE" 51+60.00
CONFORM

"FNE" 54+41.30 PI

E NEBRASKA AVE

TCE
R=60'
CONFORM

TCE
R=60'

REMOVE BASE AND
SURFACING (TYP)

ROADWAY ROW

RETAINING WALL
NO. 1

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

R=60'

MBGR (TYP)

MATCH LINE - SEE CT1111

"FNE" LINE

R=60'

DRAINAGE
DITCH (TYP)

LIMIT OF DITCH
TOE OF FILL

ROADWAY ROW

LIMIT OF DITCH

RETAINING WALL
NO. 2

CONNECT TO
EXISTING PIPE

EP

ROADWAY ROW

PIPE EXTENTION

"FNE" 43+84.93 POT=
"NCN" 20+00.00 POT

EXIST CANAL

"NCN" 30+00.00 PI
CONFORM

100 0 100 200
SCALE: 1"=100'

LINE DATA

NO.	BEARING	DISTANCE
3	N76°00'00"E	537.48'
4	S89°31'07"E	398.32'
5	S00°41'22"W	1800.00'

CURVE DATA

NO.	R	Δ	T	L
(2)	3700.00'	27°43'03"	912.84'	1789.93'
(3)	2000.00'	14°28'53"	254.10'	505.50'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00' LT "FNE" 34+08.26	145.54 LT "FNE" 38+04.75	497'	44'
2	20.00' LT "NCN" 21+81.74	20.00' LT "NCN" 27+87.11	606'	8'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E NEBRASKA AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1112
SCALE AS SHOWN
SHEET NO. 10 OF 32

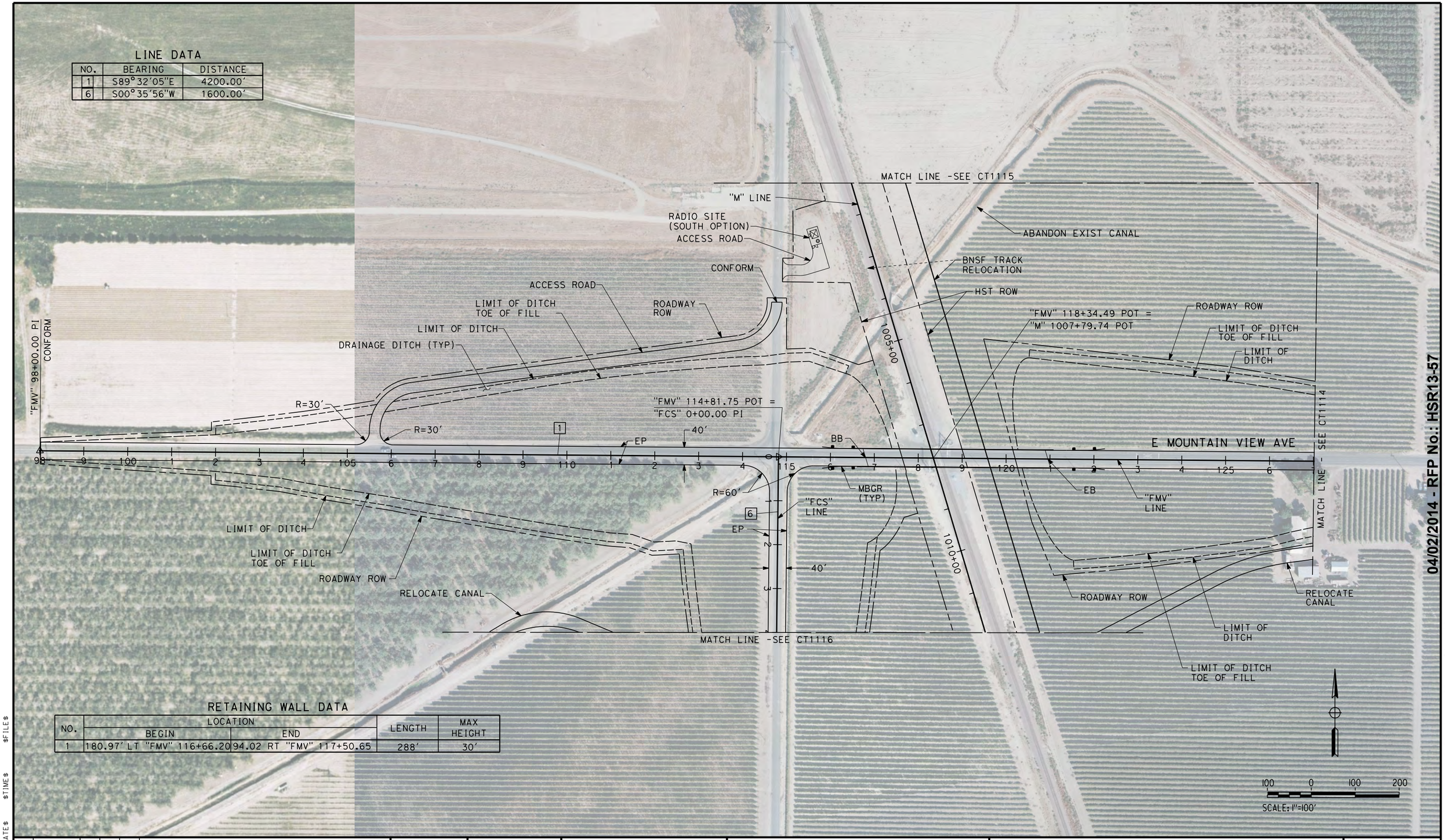
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LINE DATA

NO.	BEARING	DISTANCE
1	S89°32'05"E	4200.00'
6	S00°35'56"W	1600.00'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	180.97' LT "FMV" 116+66.20	94.02 RT "FMV" 117+50.65	288'	30'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E MOUNTAIN VIEW AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1113
SCALE AS SHOWN
SHEET NO. 11 OF 32

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

LINE DATA

NO.	BEARING	DISTANCE
1	S89°02'05"E	4200.00'
5	S00°27'55"W	170.00'

CURVE DATA

NO.	R	Δ	T	L
3	1100.00'	56°27'45"	590.59'	1084.00'

MATCH LINE - SEE CT1115

40'

EP

ROADWAY ROW

ABANDON EXIST CANAL

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

EXIST CANAL

"FCN" LINE

RELOCATE CANAL

"FCN" 31+56.39 EC

"FCN" 33+26.39 PI = "FMV" 129+41.28 POT

ROADWAY ROW

CULVERT

40'

40' R=60'

R=15'

"FMV" 138+00.00 CONFORM

"FMV" 140+00.00 PI

S WILLOW AVE

E MOUNTAIN VIEW AVE

MATCH LINE - SEE CT1113

"FMV" LINE

EP

DRAINAGE DITCH (TYP)

ROADWAY ROW

CULVERT

CONFORM

RELOCATE CANAL

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

TCE

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION LAYOUT
E MOUNTAIN VIEW AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1114
SCALE AS SHOWN
SHEET NO. 12 OF 32

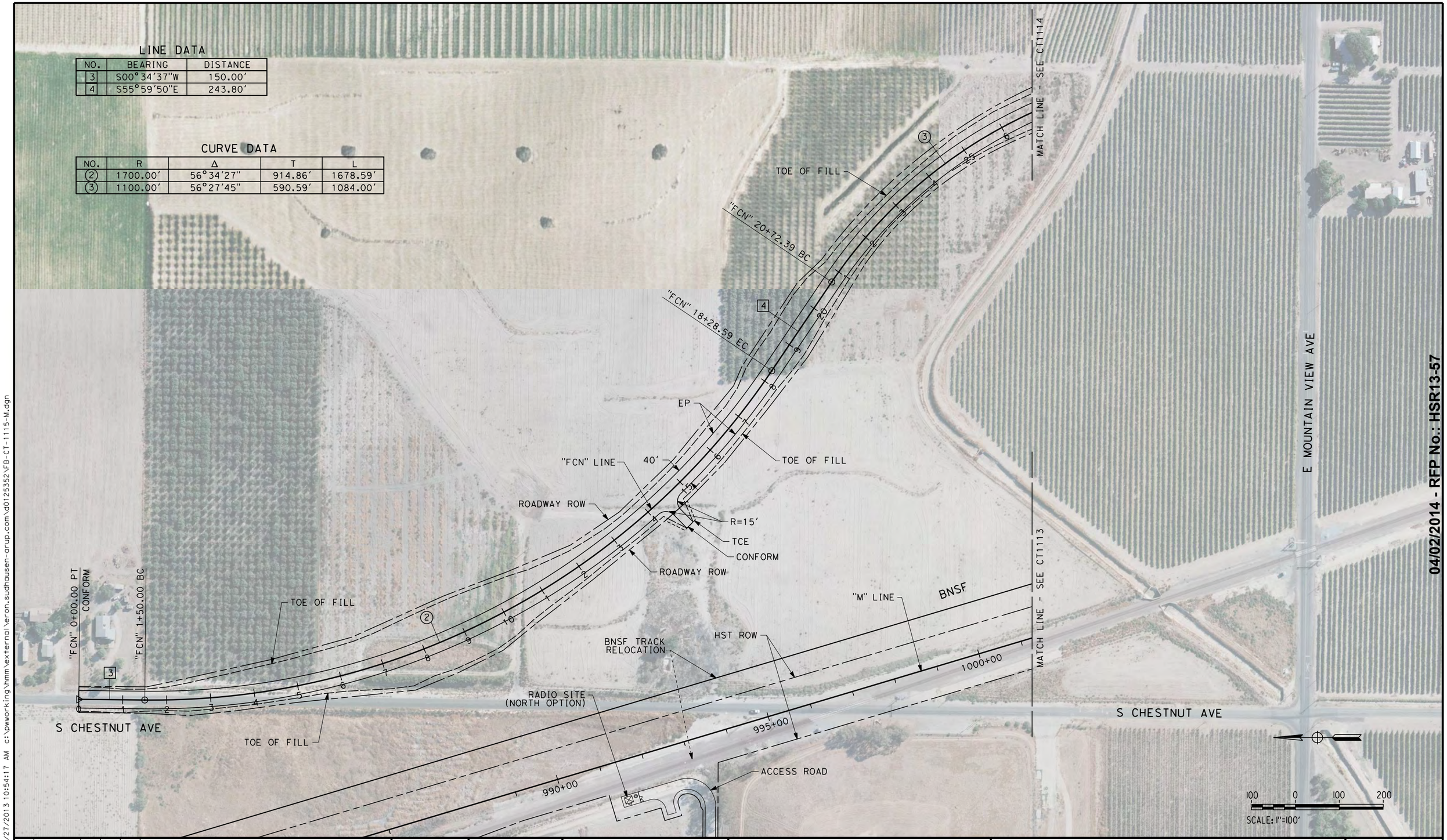
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LINE DATA

NO.	BEARING	DISTANCE
3	S00°34'37"W	150.00'
4	S55°59'50"E	243.80'

CURVE DATA

NO.	R	Δ	T	L
(2)	1700.00'	56°34'27"	914.86'	1678.59'
(3)	1100.00'	56°27'45"	590.59'	1084.00'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY LAYOUT
S CHESTNUT AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1115
SCALE AS SHOWN
SHEET NO. 13 OF 32

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LINE DATA

NO.	BEARING	DISTANCE
6	S00°35'56"W	1600.00'

CANAL REALIGNMENT
BNSF TRACK RELOCATION
BNSF
1025+00
1020+00
1015+00
"M" LINE
HST ROW
CULVERT
ROADWAY ROW
LIMIT OF DITCH
TOE OF FILL
CULVERT
CONFORM
R=15'
CONFORM
R=15'
"FCS" 16+00.00 PI CONFORM
40' "FCS" LINE
MATCH LINE - SEE CT 1113
S CHESTNUT AVE
E MOUNTAIN VIEW AVE
EP
LIMIT OF DITCH
ROADWAY ROW
R=15'
TOE OF FILL
DRAINAGE DITCH (TYP)
CANAL REALIGNMENT
CANAL REALIGNMENT
EXIST CANAL

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

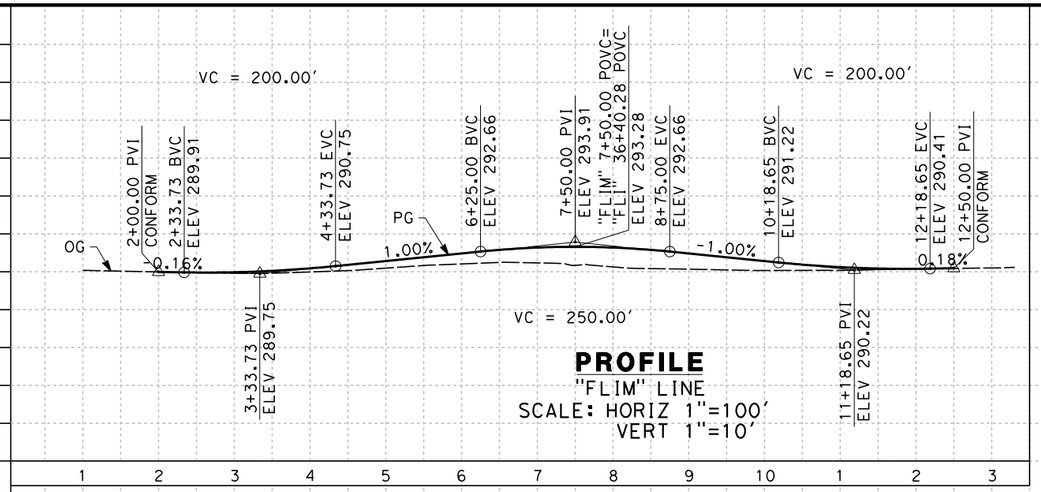
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

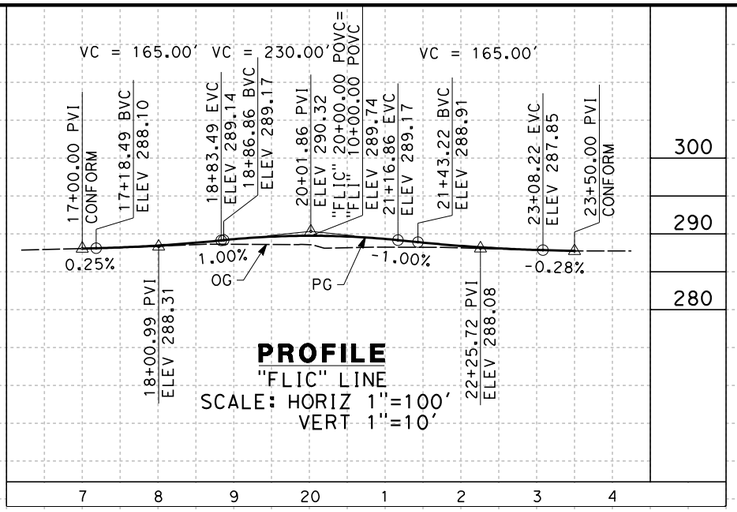
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY LAYOUT
S CHESTNUT AVE (SOUTH)

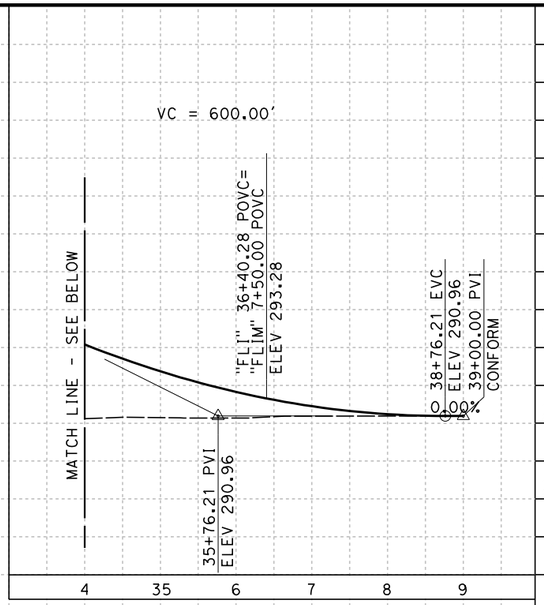
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1116
SCALE AS SHOWN
SHEET NO. 14 OF 32



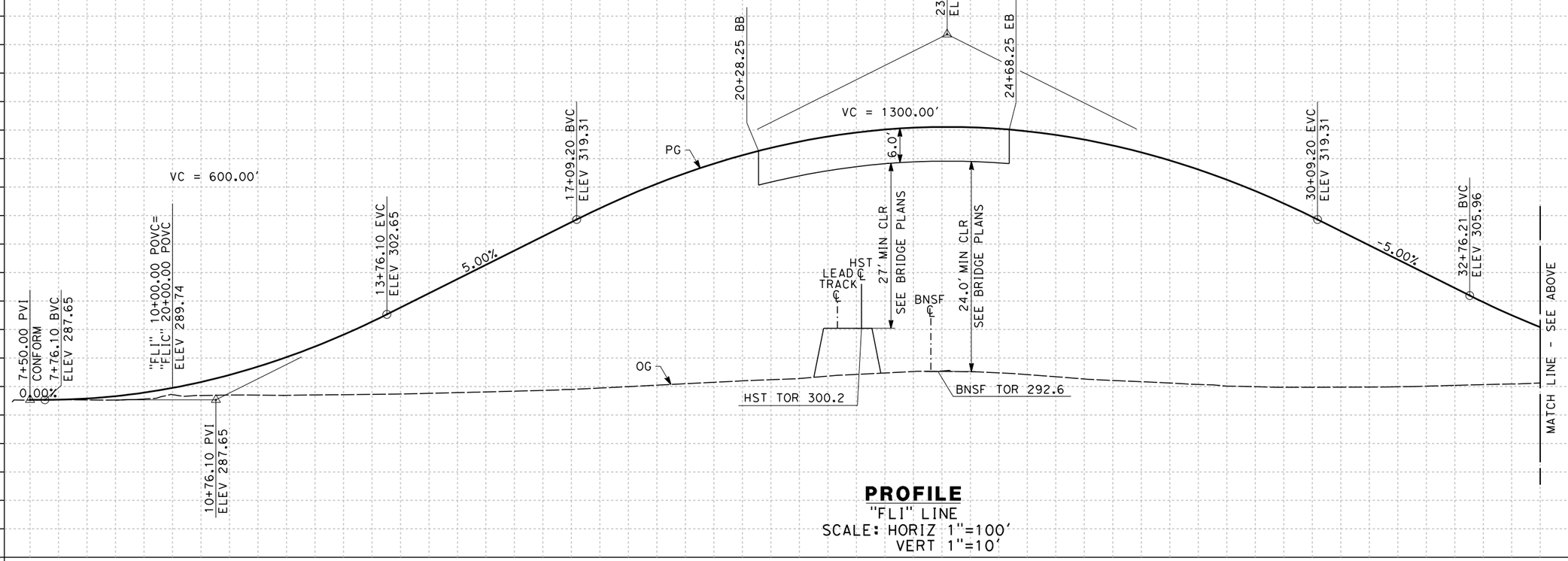
PROFILE
"FLIM" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



PROFILE
"FLIC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL



PROFILE
"FLI" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY	Exc																												
	Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

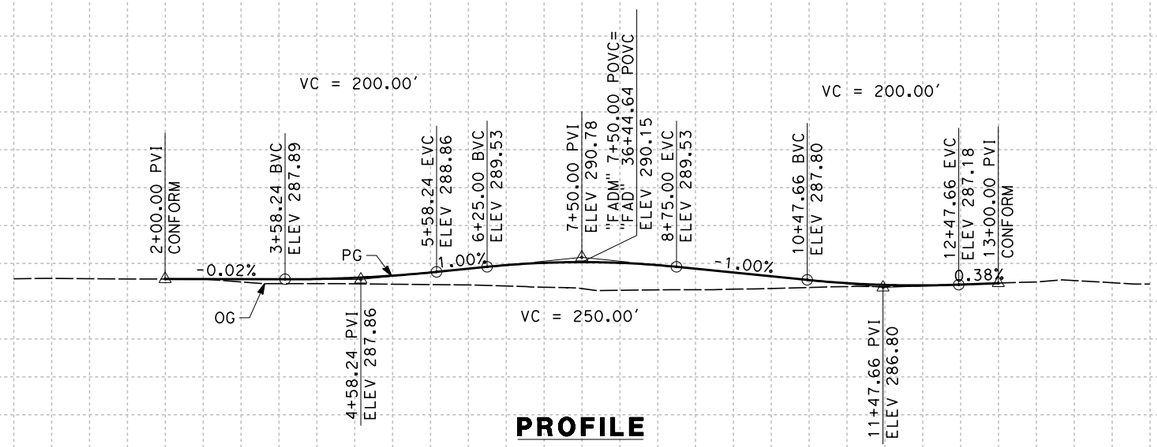
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E LINCOLN AVE AND S MAPLE AT E LINCOLN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2101
SCALE AS SHOWN
SHEET NO. 15 OF 32

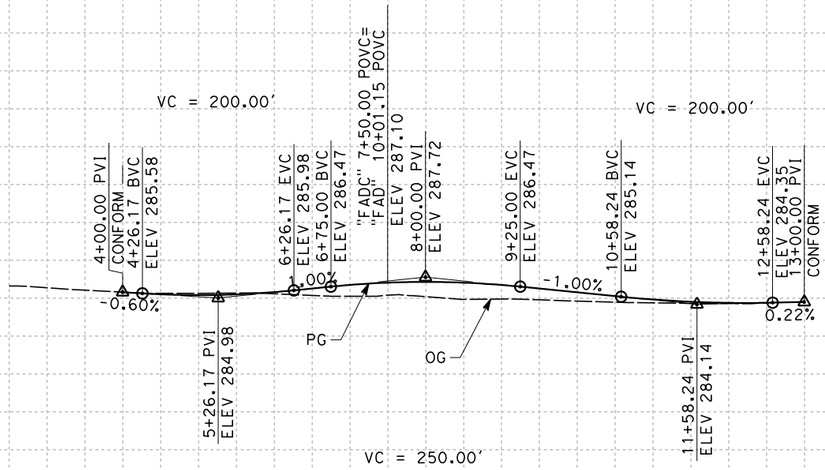
04/02/2014 - RFP NO: HSR13-57

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PROFILE

"FADM" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



PROFILE

"FADC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION																				TOTAL
CY	Exc																			
	Emb																			

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

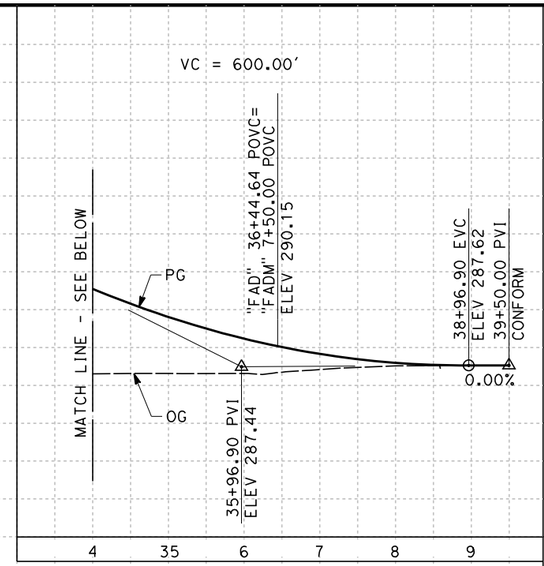
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY PROFILE
S CEDAR AND S MAPLE AT E ADAMS AVE

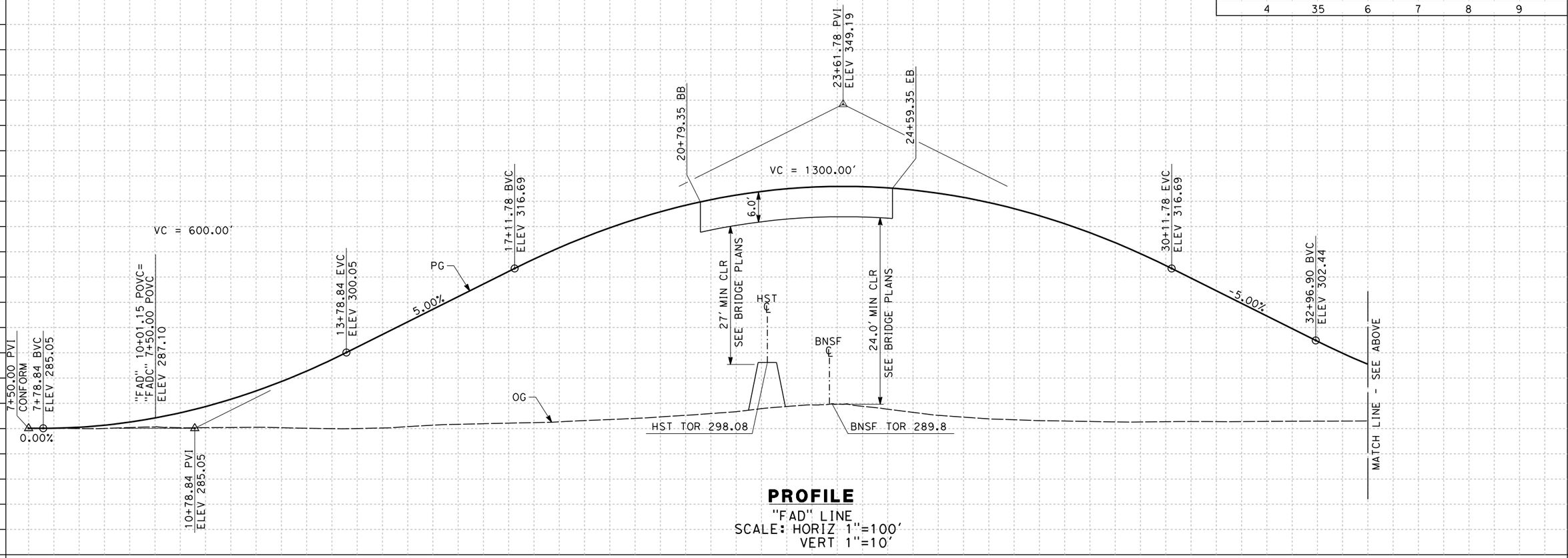
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2102
SCALE AS SHOWN
SHEET NO. 16 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL





PROFILE
"FAD" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY Exc																												
CY Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

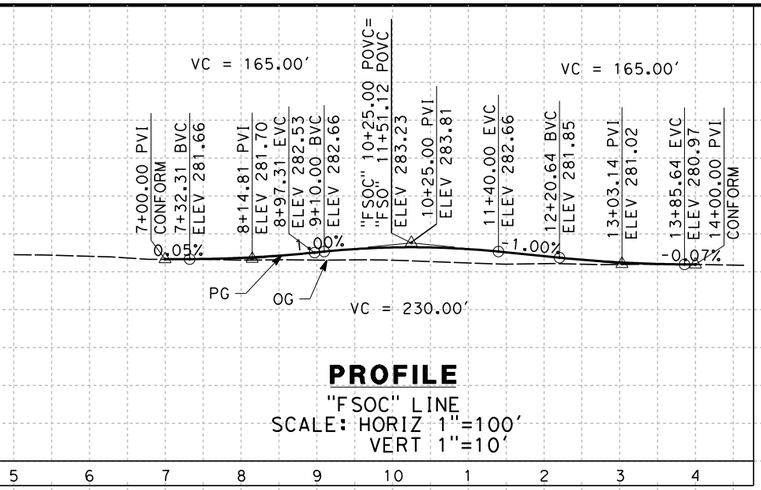
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E ADAMS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2103
SCALE AS SHOWN
SHEET NO. 17 OF 32

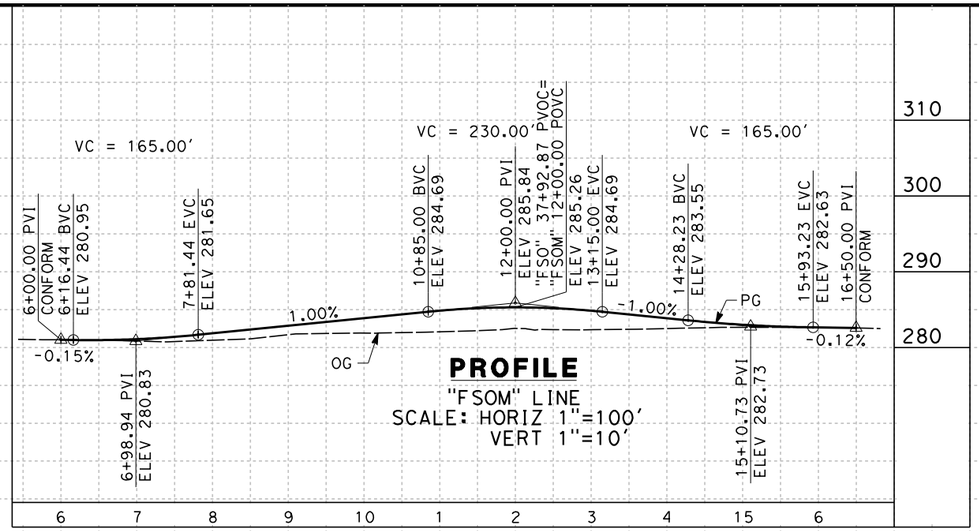
RFP NO: HSR13-57
04/02/2014 - RFP NO

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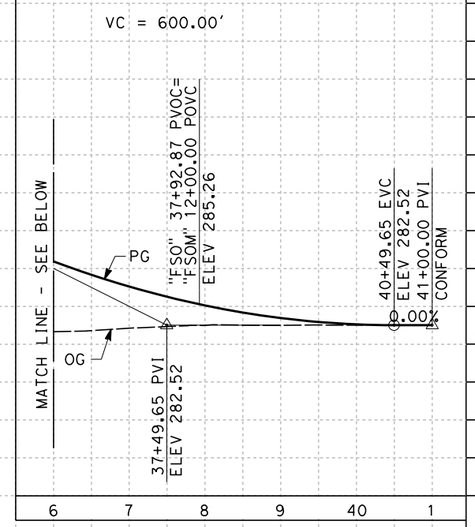


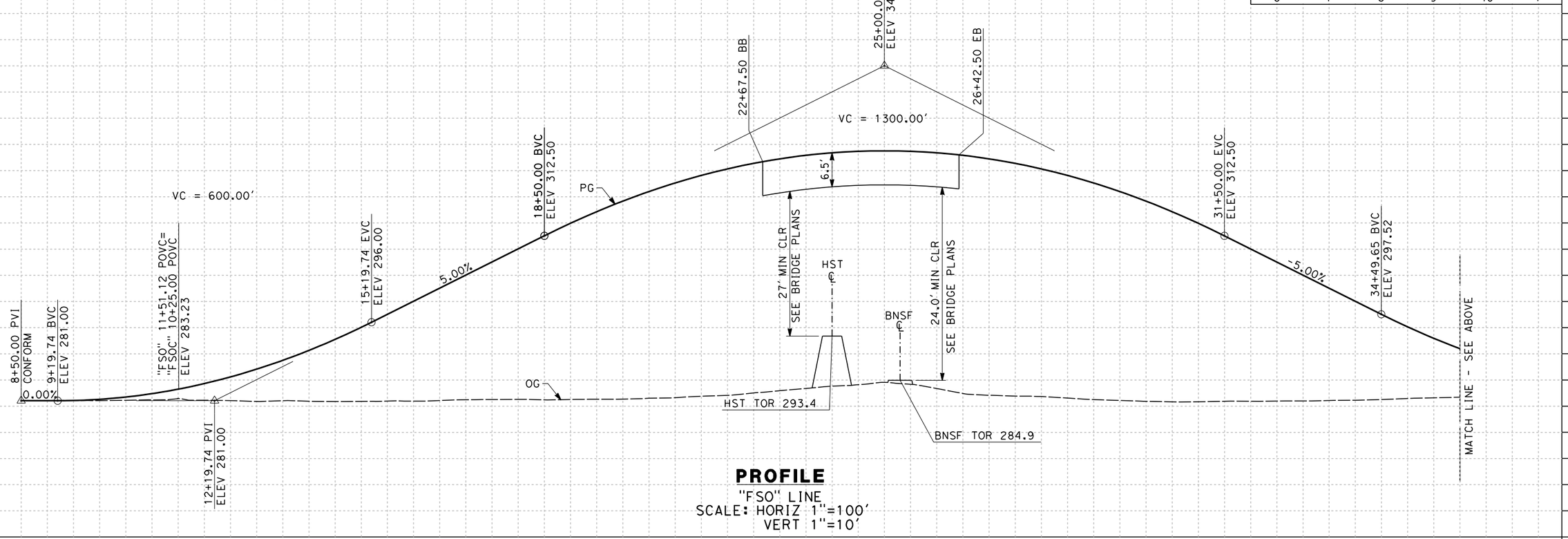
PROFILE
"FSOC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL



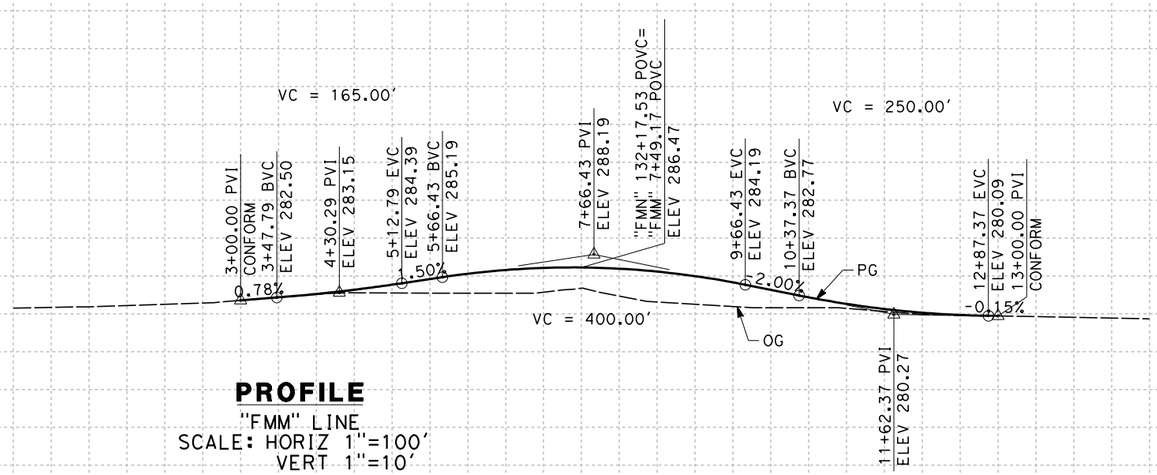
PROFILE
"FSOM" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'





PROFILE
"FSO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

| STATION | | |



PROFILE

"FMM" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY PROFILE
S MAPLE AT E MANNING AVE

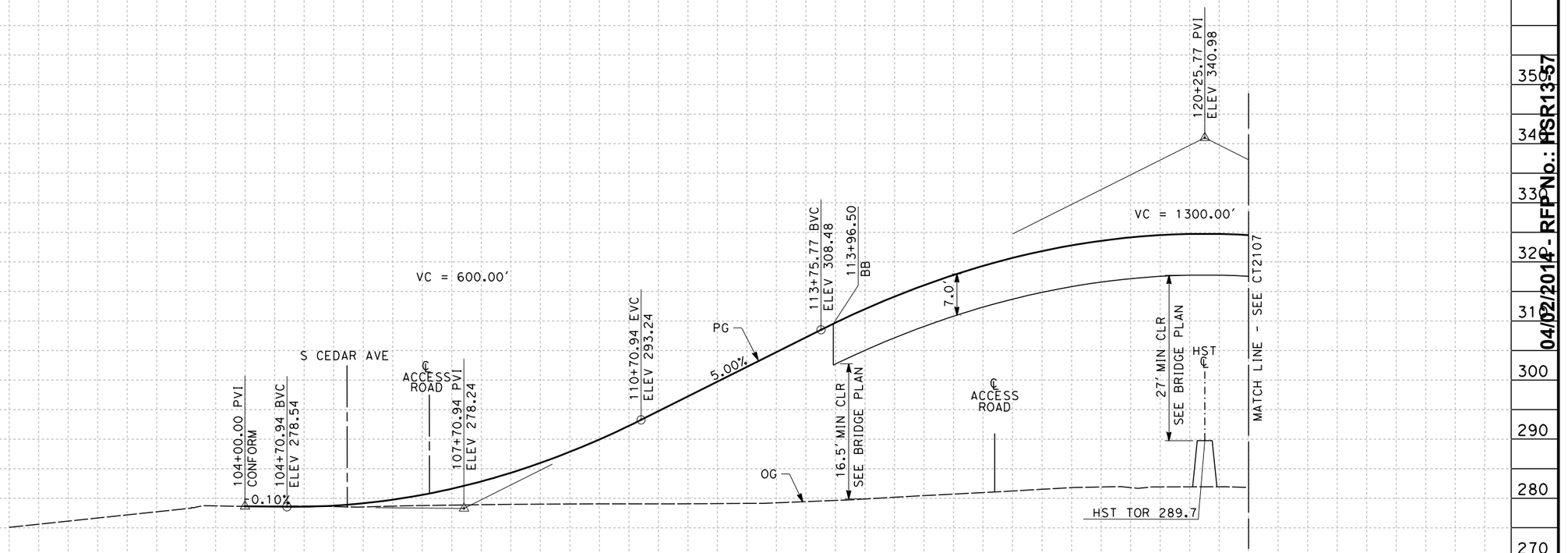
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2105
SCALE AS SHOWN
SHEET NO. 19 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE



PROFILE

"FMN" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	115	6	7	8	9	120	1	TOTAL
CY Exc																							
CY Emb																							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

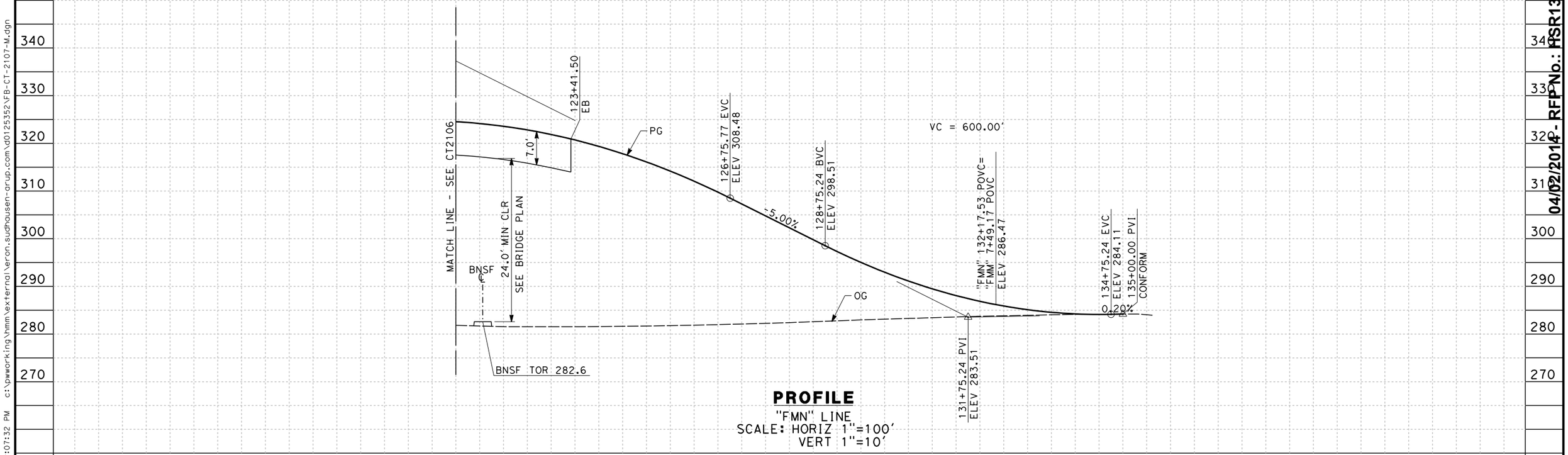
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2106
SCALE AS SHOWN
SHEET NO. 20 OF 32

04/02/2014 - RFP No.: HSR13-57

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eron.sudhausen



PROFILE

"FMN" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	1	2	3	4	125	6	7	8	9	130	1	2	3	4	135	TOTAL
CY Exc																
CY Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

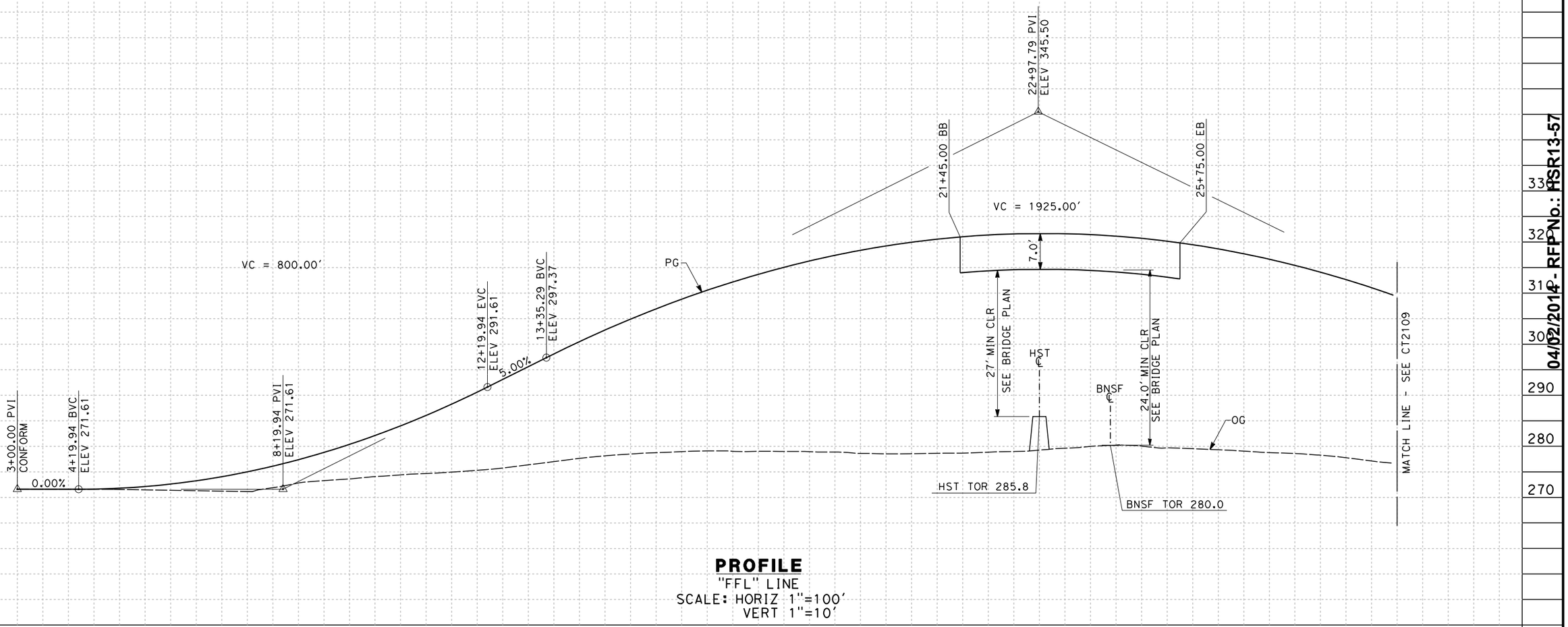
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E MANNING AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2107
SCALE AS SHOWN
SHEET NO. 21 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL



PROFILE
"FFL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

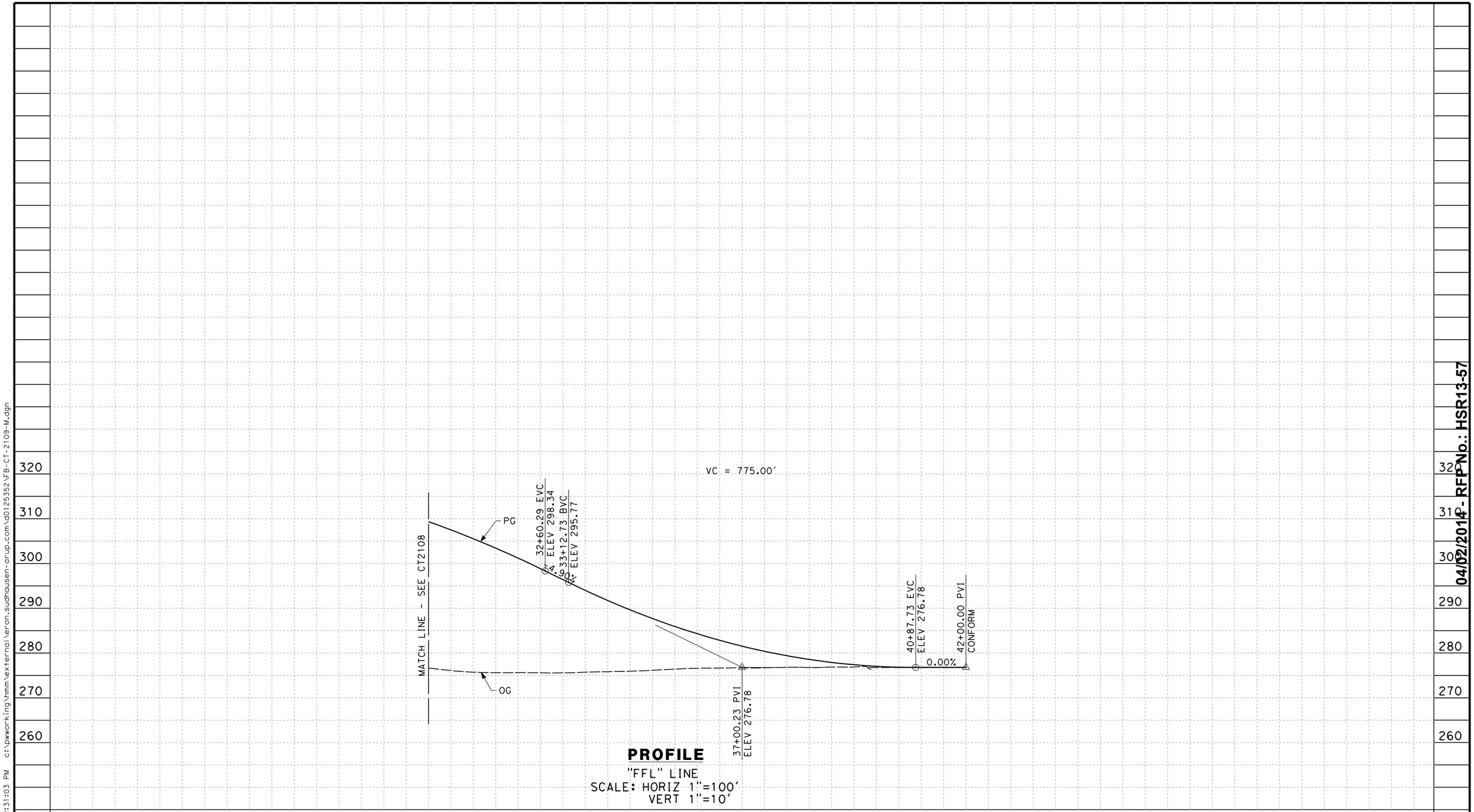
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E FLORAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2108
SCALE AS SHOWN
SHEET NO. 22 OF 32

04/02/2014 - RFP No.: HSR13-57

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PROFILE

"FFL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	30	1	2	3	4	35	6	7	8	9	40	1	2	TOTAL
CY Exc														
CY Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

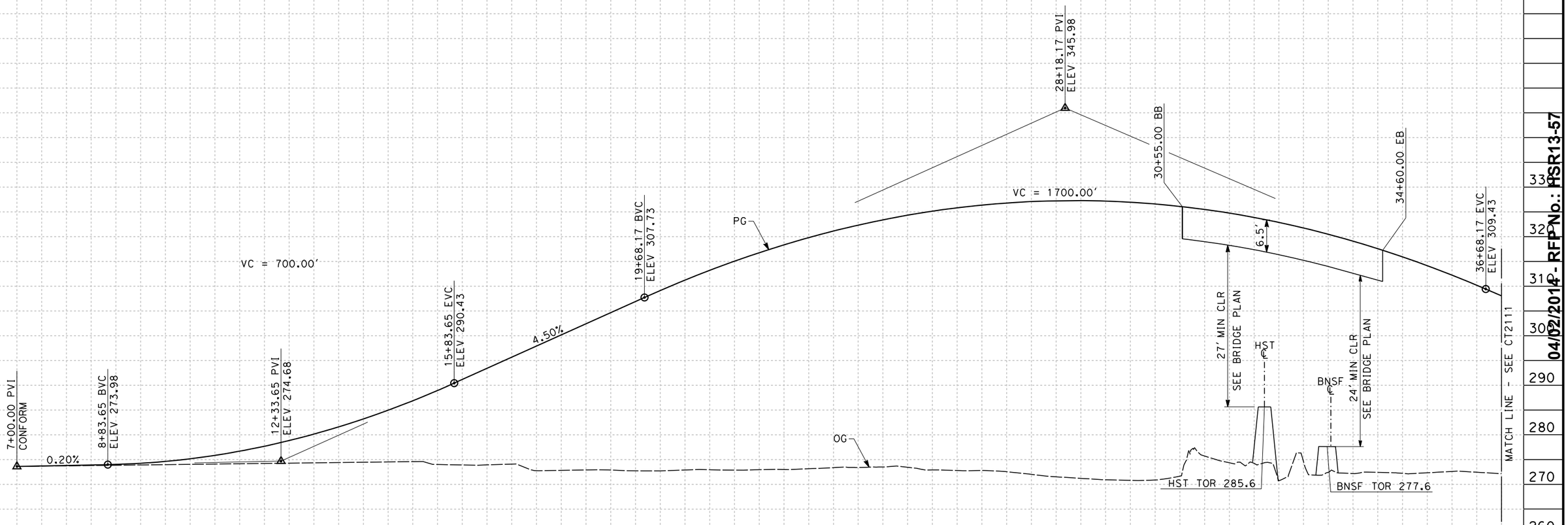
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E FLORAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2109
SCALE AS SHOWN
SHEET NO. 23 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL



PROFILE
"FNE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

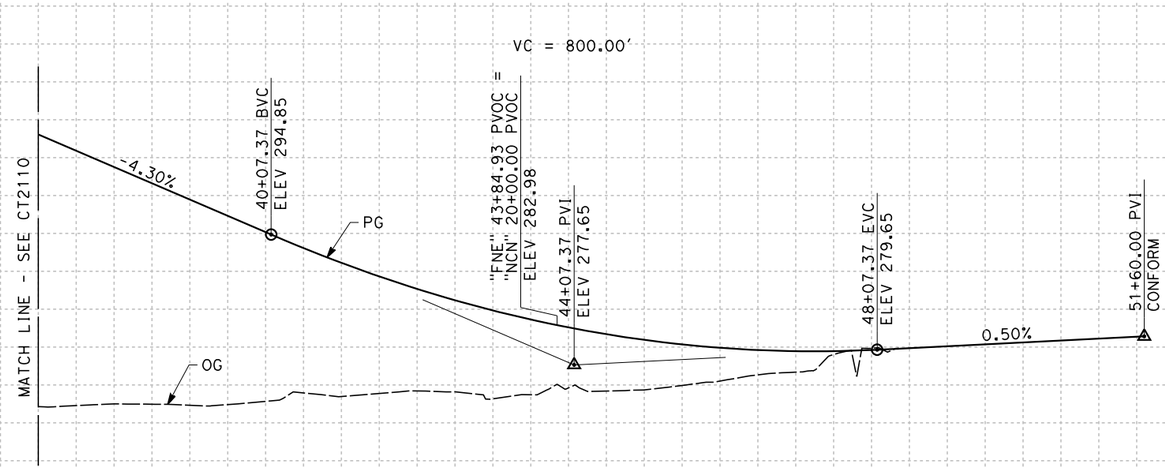
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2110
SCALE AS SHOWN
SHEET NO. 24 OF 32

04/02/2014 - RFP No.: HSR13-57

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eron.sudhausen



PROFILE

"FNE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY J. MONG
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

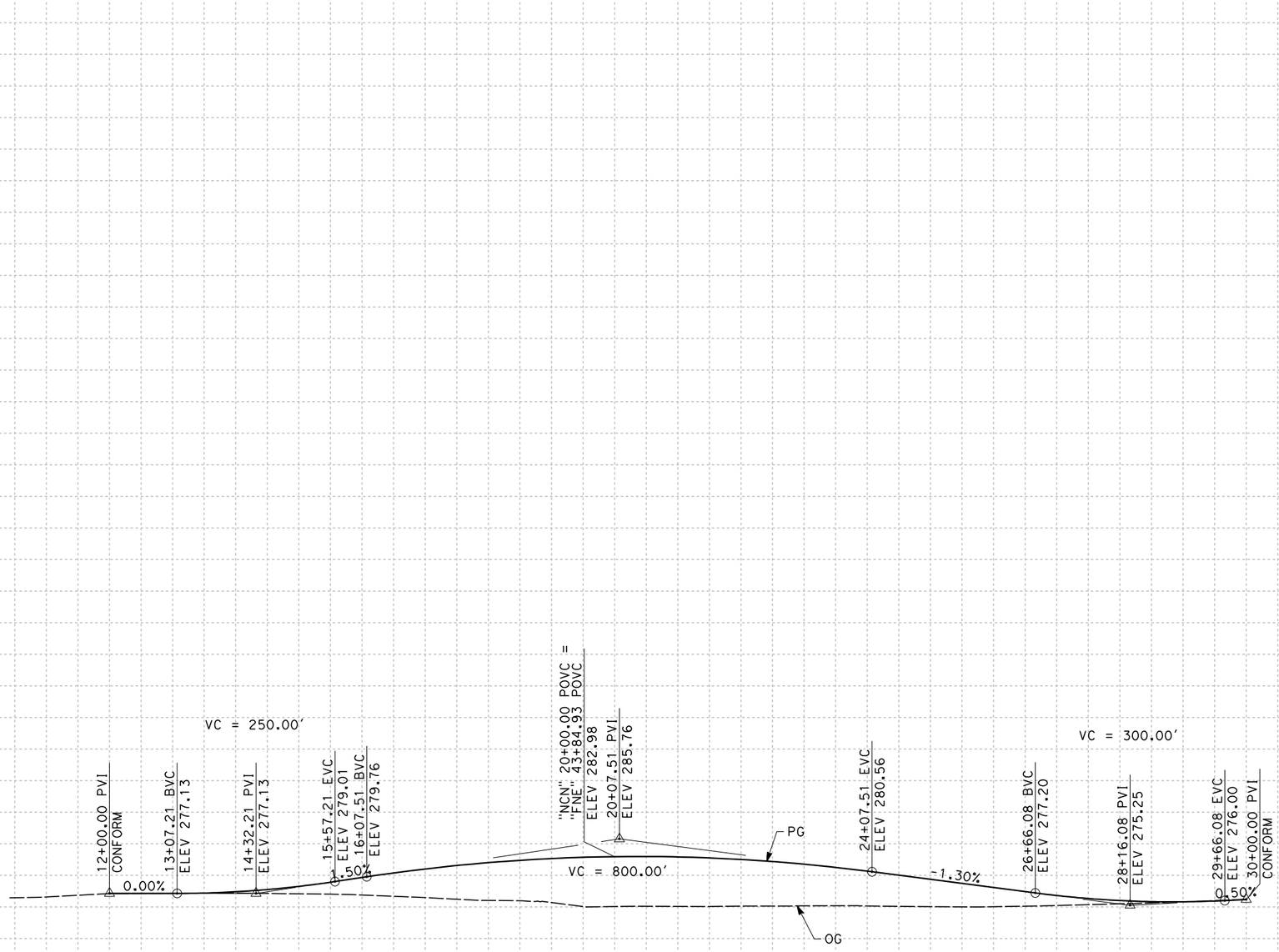
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2111
SCALE AS SHOWN
SHEET NO. 25 OF 32

RFP No.: HSR13-57 - 04/02/2014

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PROFILE

"NCN" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	TOTAL
CY Exc																							
CY Emb																							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

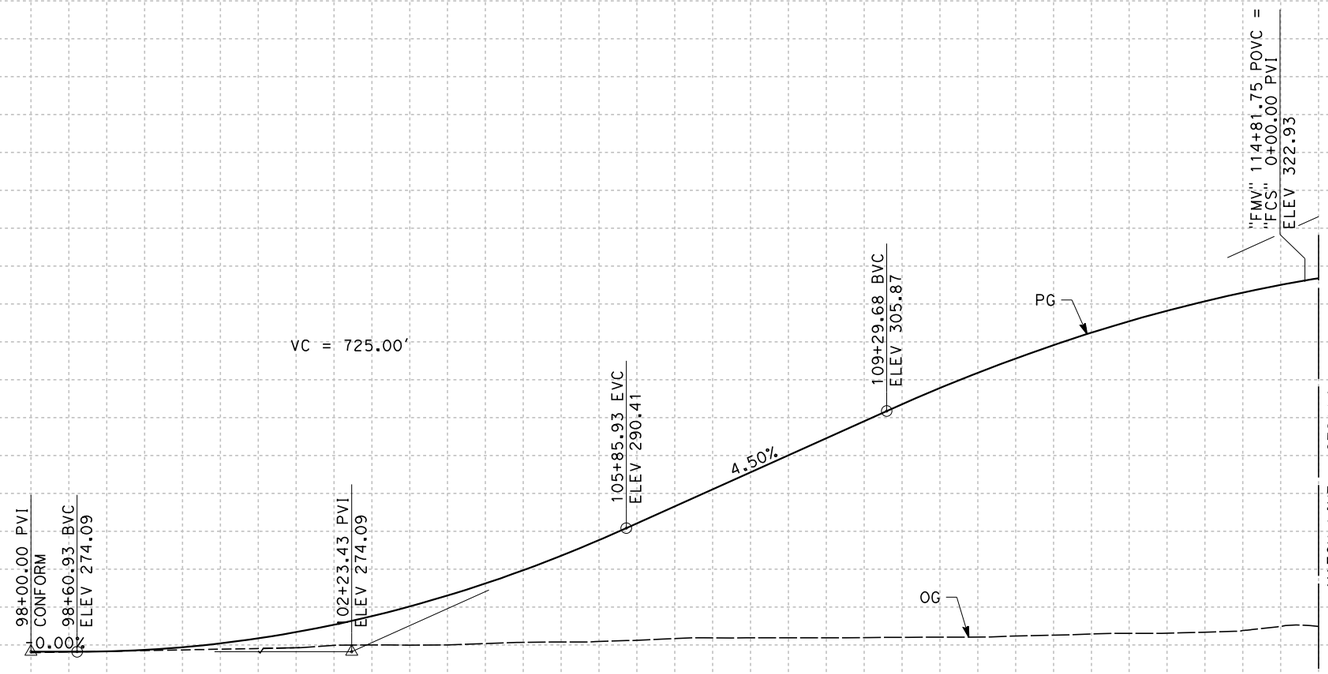
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY PROFILE
S CHESTNUT AT E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2112
SCALE AS SHOWN
SHEET NO. 26 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL



PROFILE
"FMV" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		8	9	100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	115	TOTAL
CY	Exc																			
	Emb																			

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

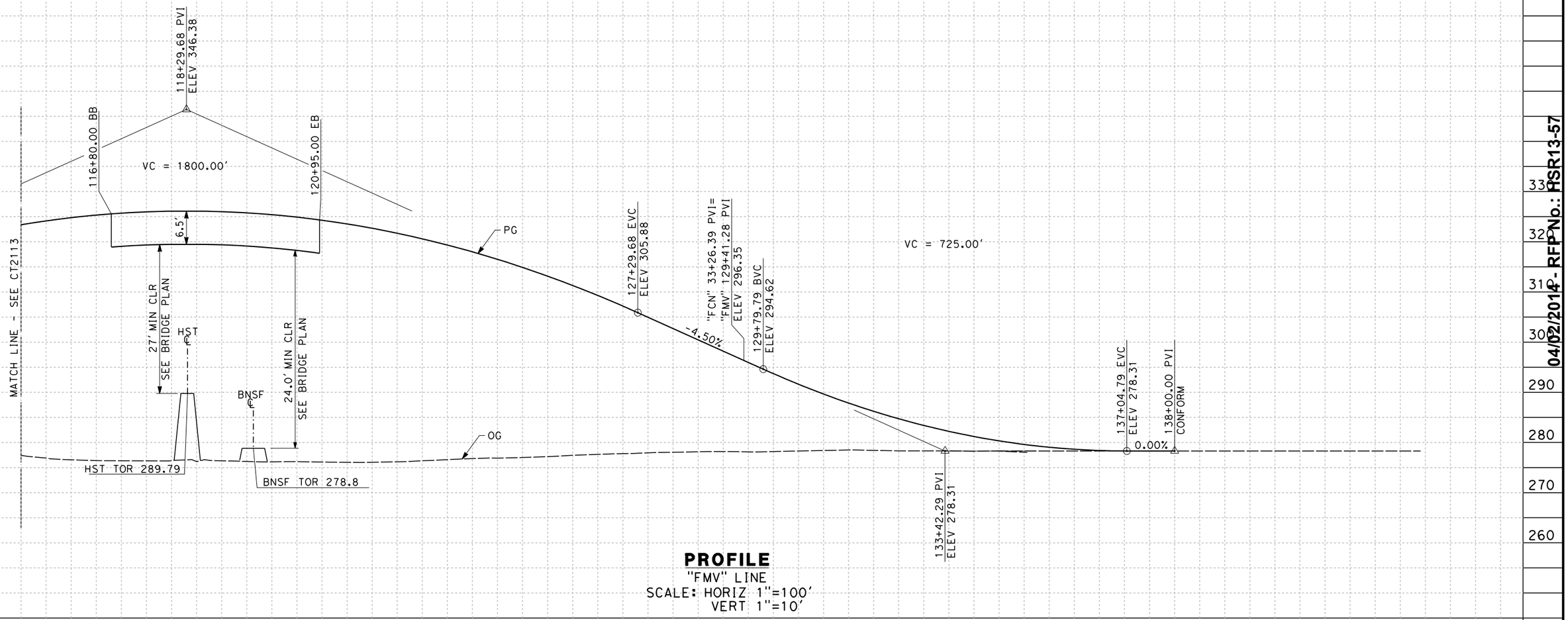
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E MOUNTAIN VIEW AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2113
SCALE AS SHOWN
SHEET NO. 27 OF 32

04/02/2014 - RFP No.: HSR13-57

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PROFILE
"FMV" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	115	6	7	8	9	120	1	2	3	4	125	6	7	8	9	130	1	2	3	4	135	6	7	8	9	140	1	2	3	4	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

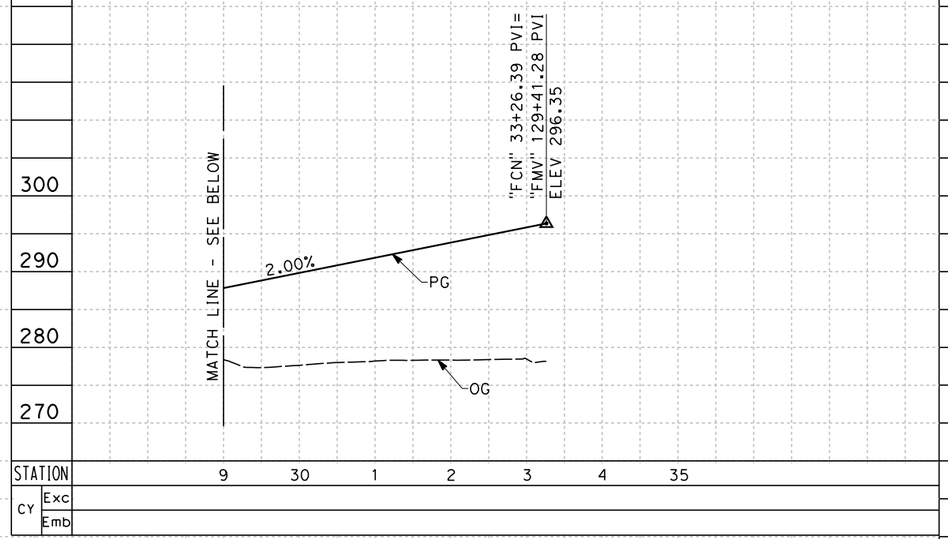
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
GRADE SEPARATION PROFILE
E MOUNTAIN VIEW AVE

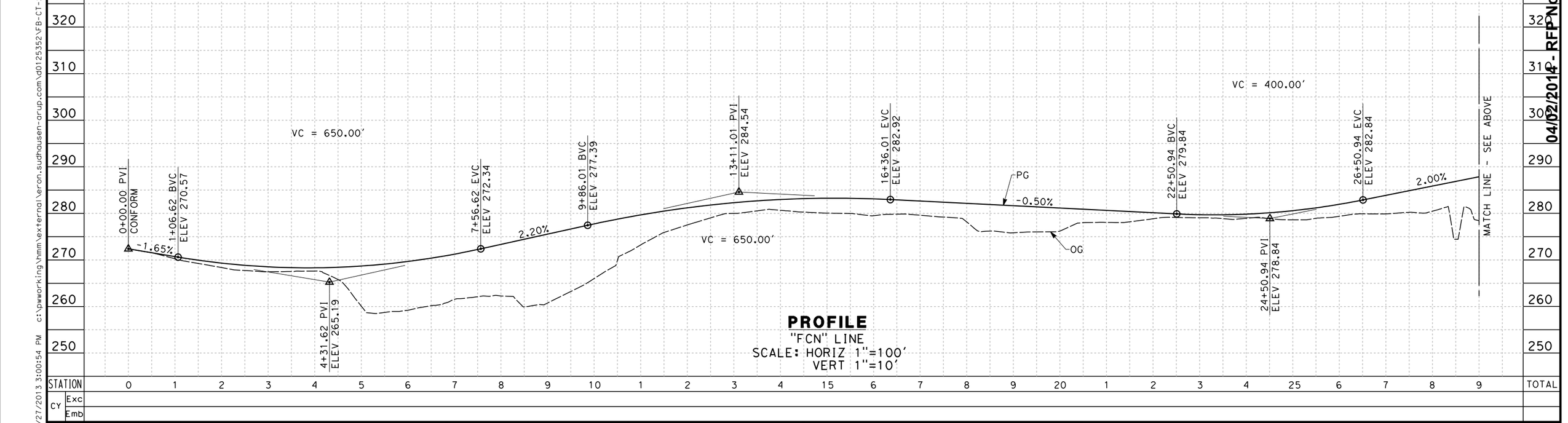
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2114
SCALE AS SHOWN
SHEET NO. 28 OF 32

04/02/2014 - RFP No.: RSR13-57

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eron.sudhausen



STATION		9	30	1	2	3	4	35
CY	Exc							
	Emb							



STATION		0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	TOTAL
CY	Exc																															
	Emb																															

PROFILE

"FCN" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

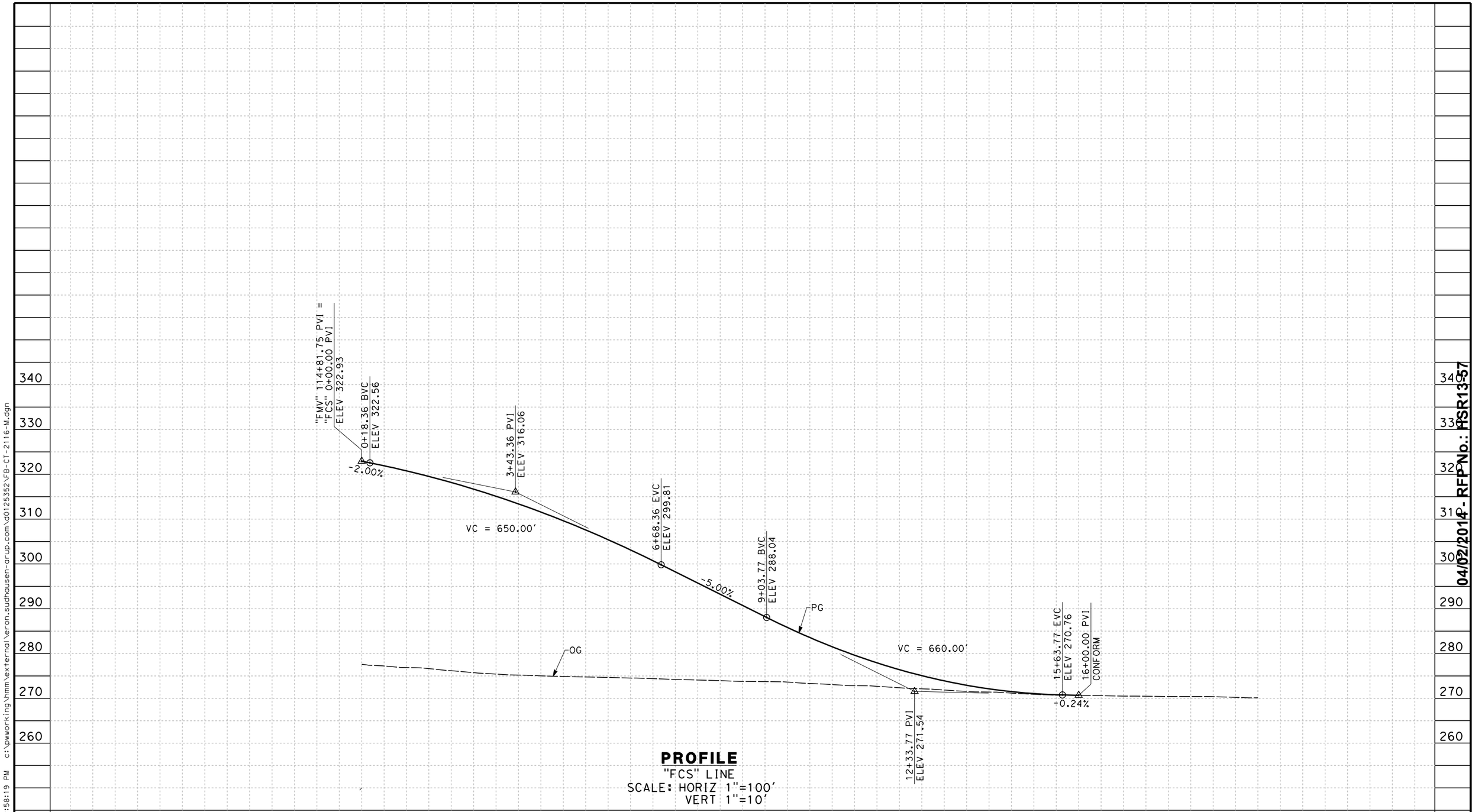
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY PROFILE
S CHESTNUT AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2115
SCALE AS SHOWN
SHEET NO. 29 OF 32

RFP No.: HSR13-57
04/02/2014

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PROFILE
"FCS" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY PROFILE
S CHESTNUT AVE (SOUTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2116
SCALE AS SHOWN
SHEET NO. 30 OF 32

04/02/2014 - RFP No.: HSR13-57

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NOTES:

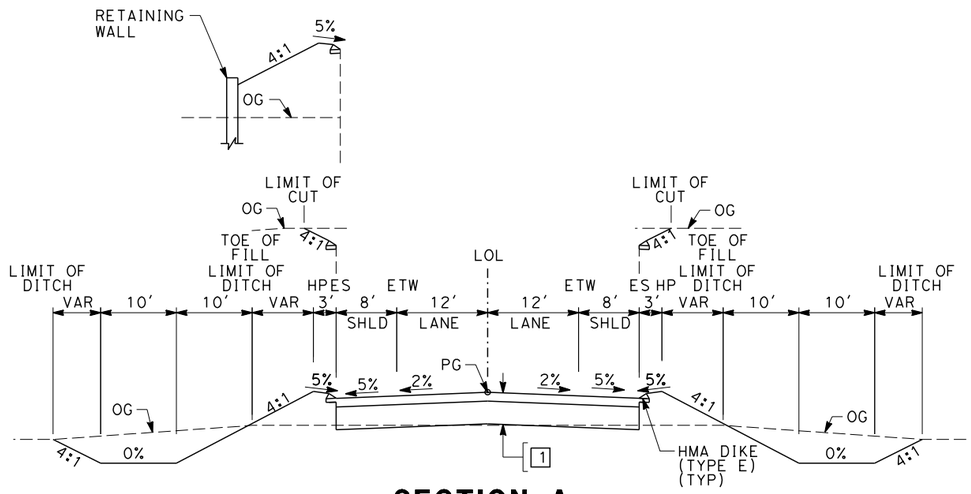
1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS
TYPICAL ROADWAY

[1] 0.60' HMA (TYPE A)
1.50' CL2 AB

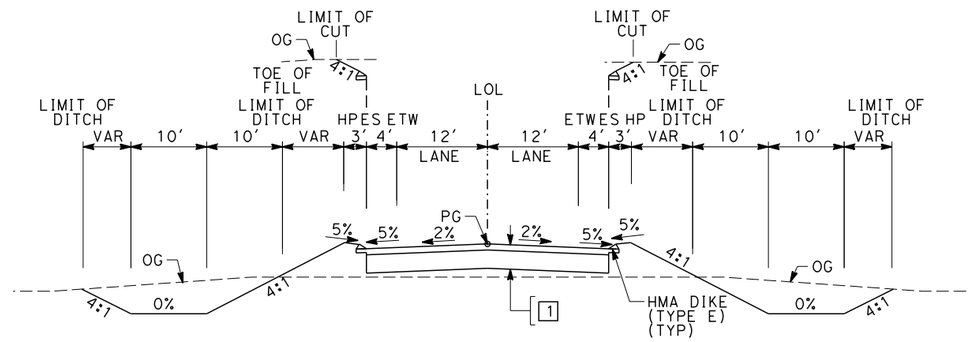
TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA/JURISDICTION
E LINCOLN AVE	FLI	55	AASHTO/FRESNO COUNTY
S MAPLE AVE AT E LINCOLN AVE	FLIM	55	AASHTO/FRESNO COUNTY
S CEDAR AVE AT E LINCOLN AVE	FLIC	55	AASHTO/FRESNO COUNTY
E ADAMS AVE	FAD	55	AASHTO/FRESNO COUNTY
S MAPLE AVE AT E ADAMS AVE	FADM	55	AASHTO/FRESNO COUNTY
S CEDAR AVE AT E ADAMS AVE	FADC	55	AASHTO/FRESNO COUNTY
E SOUTH AVE	FSO	55	AASHTO/FRESNO COUNTY
S MAPLE AVE AT E SOUTH AVE	FSOM	55	AASHTO/FRESNO COUNTY
S CEDAR AVE AT E SOUTH AVE	FSOC	55	AASHTO/FRESNO COUNTY
E MANNING AVE	FMN	55	AASHTO/FRESNO COUNTY
S MAPLE AVE AT E MANNING AVE	FMM	55	AASHTO/FRESNO COUNTY
E FLORAL AVE	FFL	65	AASHTO/FRESNO COUNTY
E NEBRASKA AVE	FNE	65	AASHTO/FRESNO COUNTY
S CHESTNUT AVE AT E NEBRASKA AVE	NCN	65	AASHTO/FRESNO COUNTY
E MOUNTAIN VIEW AVE	FMV	65	AASHTO/FRESNO COUNTY
S CHESTNUT AVE	FCN/FCS	65/55	AASHTO/FRESNO COUNTY



SECTION A

"FLI" 10+00.00 TO 20+28.25
"FLI" 24+68.25 TO 36+00.00
"FAD" 12+50.00 TO 20+79.35
"FAD" 24+59.35 TO 36+00.00
"FNE" 10+00.00 TO 30+55.00
"FNE" 34+60.00 TO 43+50.00
"FMV" 102+00.00 TO 116+80.00
"FMV" 120+95.00 TO 133+30.00
"FCN" 28+50.00 TO 33+26.39
"FCS" 0+00.00 TO 13+00.00
"FMN" 104+00.00 TO 109+00.00
"FMN" 123+41.50 TO 130+00.00
"FFL" 7+00.00 TO 21+45.00
"FFL" 25+75.00 TO 37+00.00



SECTION B

"FSO" 14+00.00 TO 22+67.50
"FSO" 26+42.50 TO 38+00.00

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

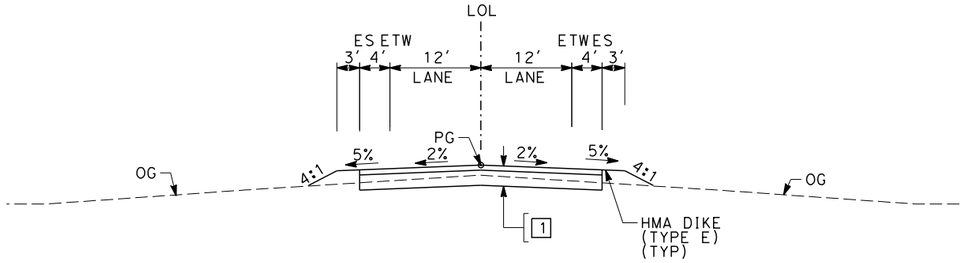
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

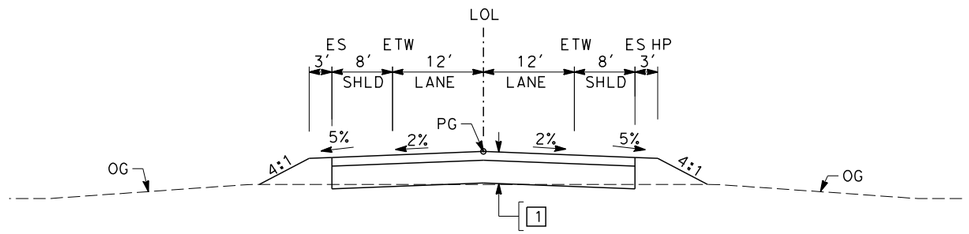
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3010
SCALE NO SCALE
SHEET NO. 31 OF 32



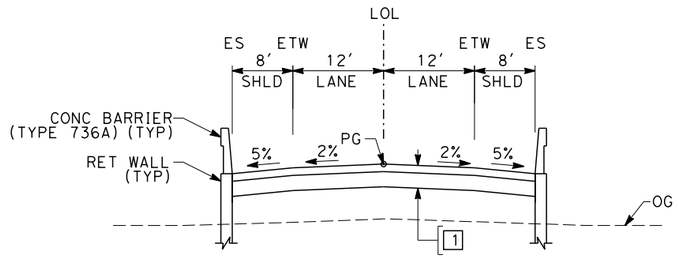
SECTION C

"NCN"	12+00.00	TO 30+00.00	"FSO"	8+50.00	TO 14+00.00
"FLIM"	2+00.00	TO 12+50.00	"FSO"	38+00.00	TO 41+00.00
"FADM"	2+00.00	TO 13+00.00	"FFL"	3+00.00	TO 7+00.00
"FMM"	3+00.00	TO 13+00.00	"FFL"	37+00.00	TO 42+00.00
"FSOM"	6+00.00	TO 16+50.00			



SECTION E

"FADC"	4+00.00	TO 13+00.00	"FMN"	130+00.00	TO 135+00.00
"FSOC"	7+00.00	TO 14+00.00	"FNE"	7+00.00	TO 10+00.00
"FLIC"	17+00.00	TO 23+50.00	"FNE"	43+50.00	TO 51+60.00
"FLI"	7+50.00	TO 10+00.00	"FMV"	98+00.00	TO 102+00.00
"FLI"	36+00.00	TO 39+00.00	"FMV"	133+30.00	TO 138+00.00
"FAD"	7+50.00	TO 12+50.00	"FCS"	13+00.00	TO 16+00.00
"FAD"	36+00.00	TO 39+00.00	"FCN"	00+00.00	TO 28+50.00



SECTION D

"FMN" 109+00.00 TO 113+96.50

04/02/2014 - RFP No.: HSR13-57

$USER$ $DATE$ $TIME$ $FILE$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3011
SCALE NO SCALE
SHEET NO. 32 OF 32

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
E CLARKSON AVE	1180+25.00	FRESNO COUNTY
S MINNEWAWA AVE	1198+00.00	FRESNO COUNTY



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO.: HSR 06-0003
DRAWING NO.: CB0055
SCALE: AS SHOWN
SHEET NO.: 1 OF 60

04/02/2014 - RFP No.: HSR13-57

eron.sudhausen 12/27/2013 4:00:24 PM c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CB-0055-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°31'37"W	284.71'
2	S49°19'59"W	1139.17'

CURVE DATA

NO.	R	Δ	T	L
(1)	1700.00'	48°48'22"	771.26'	1448.11'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CLOVIS AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1117
SCALE AS SHOWN
SHEET NO. 2 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
3	S02°32'24"W	239.63'

CURVE DATA

NO.	R	Δ	T	L
(2)	1700.00'	46°47'36"	735.54'	1388.38'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1118
SCALE AS SHOWN
SHEET NO. 3 OF 60

$USER$ $DATE$ $TIME$ $FILE$



LINE DATA

NO.	BEARING	DISTANCE
1	S89°22'57"E	4200.00'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1119
SCALE AS SHOWN
SHEET NO. 4 OF 60

04/02/2014 - RFP No.: HSR13-57

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alton.cannon

LINE DATA

NO.	BEARING	DISTANCE
1	S89°22'57"E	4200.00'

CONFORM
LIMIT OF DITCH
TOE OF FILL
ACCESS ROAD
ROADWAY ROW
LIMIT OF DITCH
R=20'
"FEL" 39+00.00
CONFORM
"FEL" 43+00.00 PI
"FEL" LINE
40'
EP
MATCH LINE - SEE CT1119
DRAINAGE DITCH (TYP)
ROADWAY ROW
LIMIT OF DITCH
TOE OF FILL
LIMIT OF DITCH
E ELKHORN AVE
S FOWLER AVE
REMOVE BASE
AND SURFACING
100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

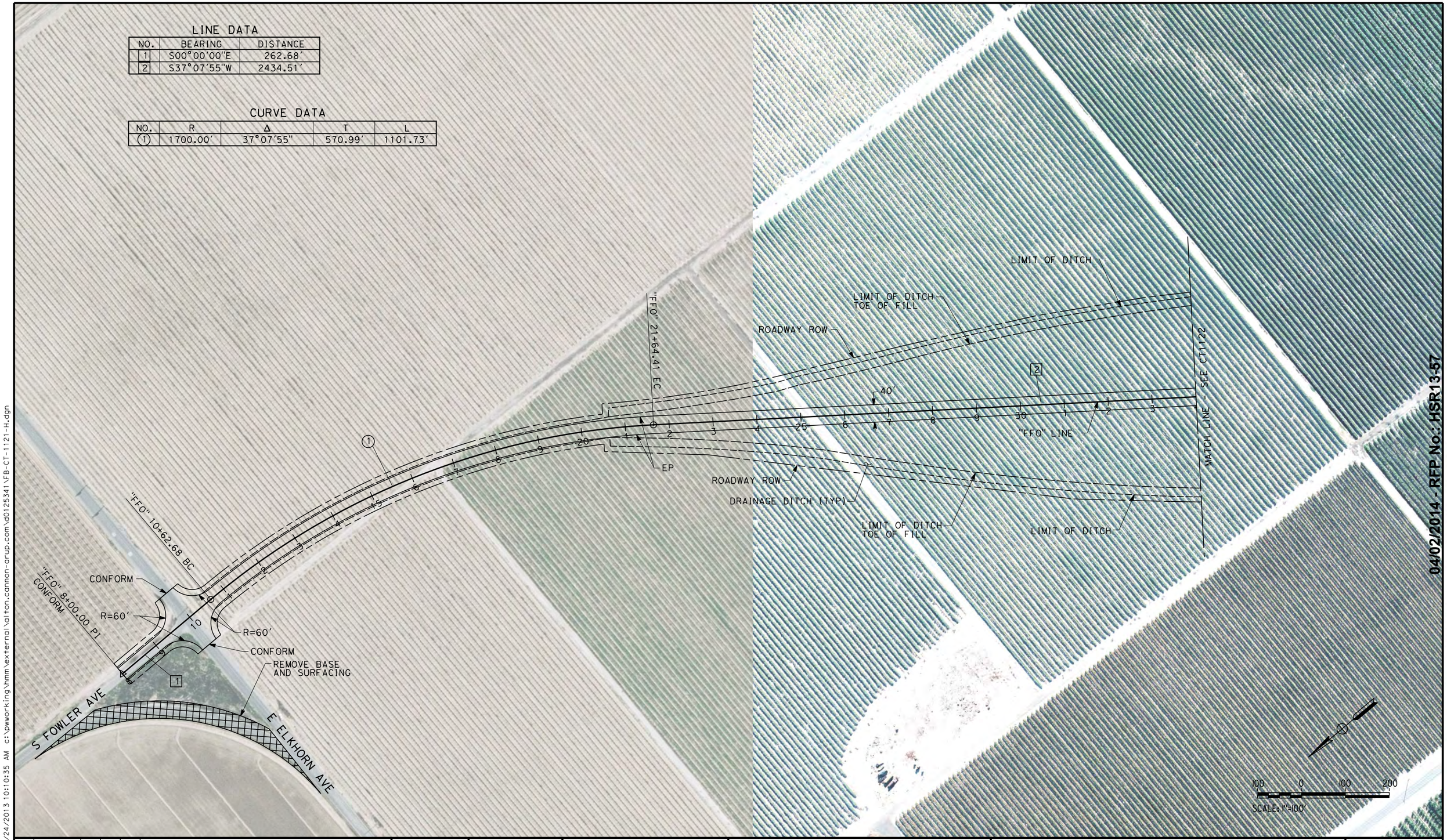
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1120
SCALE AS SHOWN
SHEET NO. 5 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S00°00'00"E	262.68'
2	S37°07'55"W	2434.51'

CURVE DATA

NO.	R	Δ	T	L
(1)	1700.00'	37°07'55"	570.99'	1101.73'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1121
SCALE AS SHOWN
SHEET NO. 6 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
2	S37°07'55"W	2434.51'
3	S01°53'22"W	255.41'

CURVE DATA

NO.	R	Δ	T	L
(2)	1700.00'	35°14'34"	539.97'	1045.67'

"H" LINE

"H" 1225+00.00

HST ROW

"FFO" 37+35.91 POT = "H" 1289+37.98 POC

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

"FFO" 45+98.92 BC

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

ROADWAY ROW

"FFO" LINE

BB

EB

40'

EP

MBGR (TYP)

MATCH LINE - SEE CT1121

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

ROADWAY ROW

"H" 1285+00

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

REMOVE BASE AND SURFACING

"FFO" 59+00.00 PI CONFORM

"FFO" 56+44.59 EC

S FOWLER AVE

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

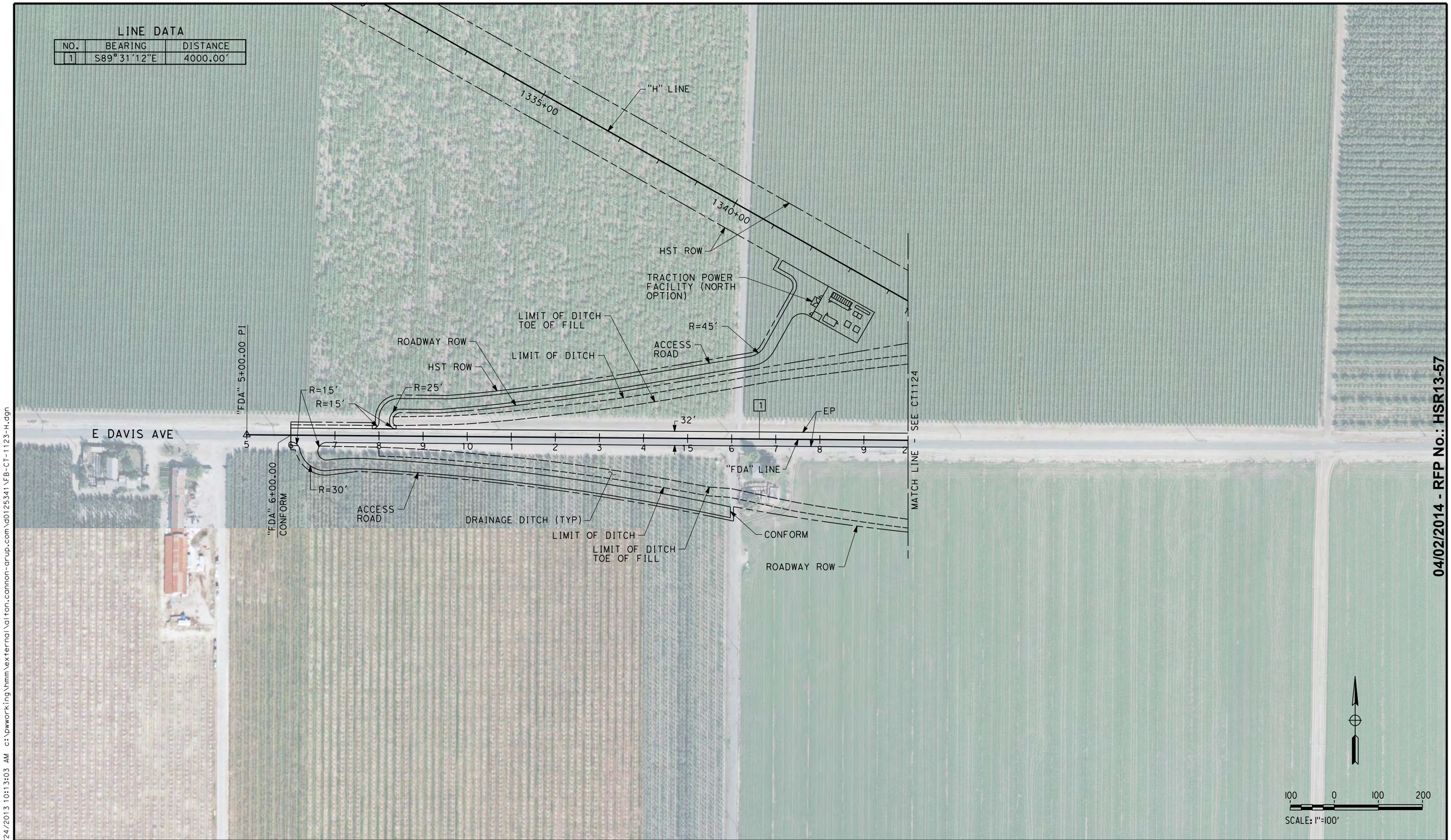
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S FOWLER AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1122
SCALE AS SHOWN
SHEET NO. 7 OF 60

eron.sudhausen 12/27/2013 4:05:51 PM c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CT-1122-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S89°31'12"E	4000.00'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

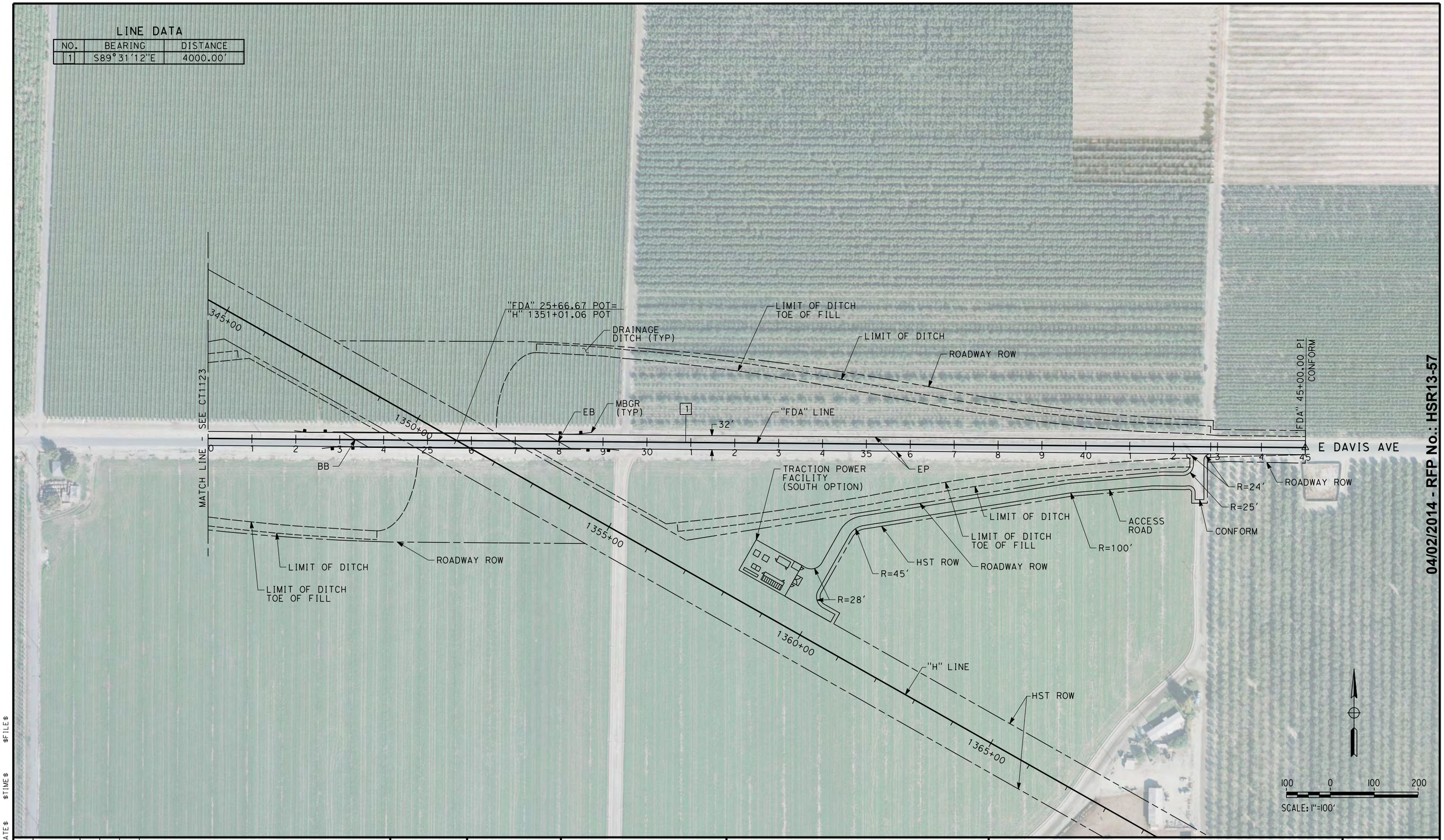
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E DAVIS AVE

CONTRACT NO. HST 06-0003
DRAWING NO. CT1123
SCALE AS SHOWN
SHEET NO. 8 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°31'12"E	4000.00'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E DAVIS AVE

CONTRACT NO.: HSR 06-0003
DRAWING NO.: CT1124
SCALE: AS SHOWN
SHEET NO.: 9 OF 60

$USER$ $TIME$ $DATE$ $FILE$

LINE DATA

NO.	BEARING	DISTANCE
1	S89°47'26"E	3600.00'
2	S00°21'19"W	1600.00'
5	S 0°12'34"W	244.41'

CURVE DATA

NO.	R	Δ	T	L
(2)	700.00'	45°34'21"	294.06'	556.77'

LIMIT OF DITCH TOE OF FILL
ROADWAY ROW
LIMIT OF DITCH
MATCH LINE - SEE CT1132
"K8N" LINE
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
MATCH LINE - SEE CT1132
REMOVE BASE AND SURFACING (TYP)
1650+00
"KDO" 28+02.35 POT= "H" 1654+01.38 POC
"K8N" 32+29.17 EC
LIMIT OF DITCH
ROADWAY ROW
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
"KDO" 10+00.00 PI CONFORM
"KDO" LINE
32'
"KDO" 23+95.00 POT
"K8S" 10+00.00 PI
40'
R=60'
R=60'
32'
SEE - CT1131
MATCH LINE
DOVER AVE
R=60'
LIMIT OF DITCH TOE OF FILL
ROADWAY ROW
LIMIT OF DITCH
8TH AVE
MBGR (TYP)
BB
EB
EP
"KDO" 31+50.00 POT= "K8N" 34+73.58 PI
1655+00
32'
MATCH LINE - SEE CT1133
"K8S" LINE
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
HST ROW
1660+00
"H" LINE
100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
DOVER AVE

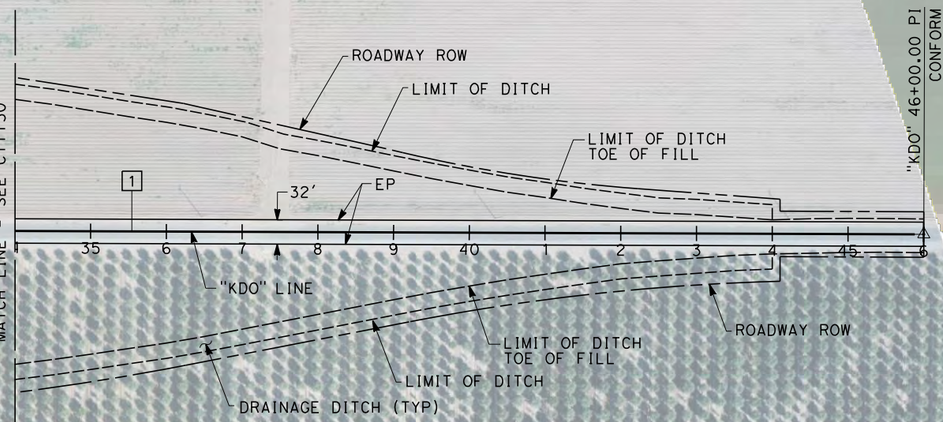
CONTRACT NO. HST 06-0003
DRAWING NO. CT1130
SCALE AS SHOWN
SHEET NO. 10 OF 60

$FILE$ $TIME$ $DATE$ $USER$

12/24/2013 10:25:32 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1131-H.dgn
alton.cannon

LINE DATA

NO.	BEARING	DISTANCE
1	S89°47'26"E	3600.00'



"KDO" 46+00.00 PI CONFORM

DOVER AVE

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
DOVER AVE

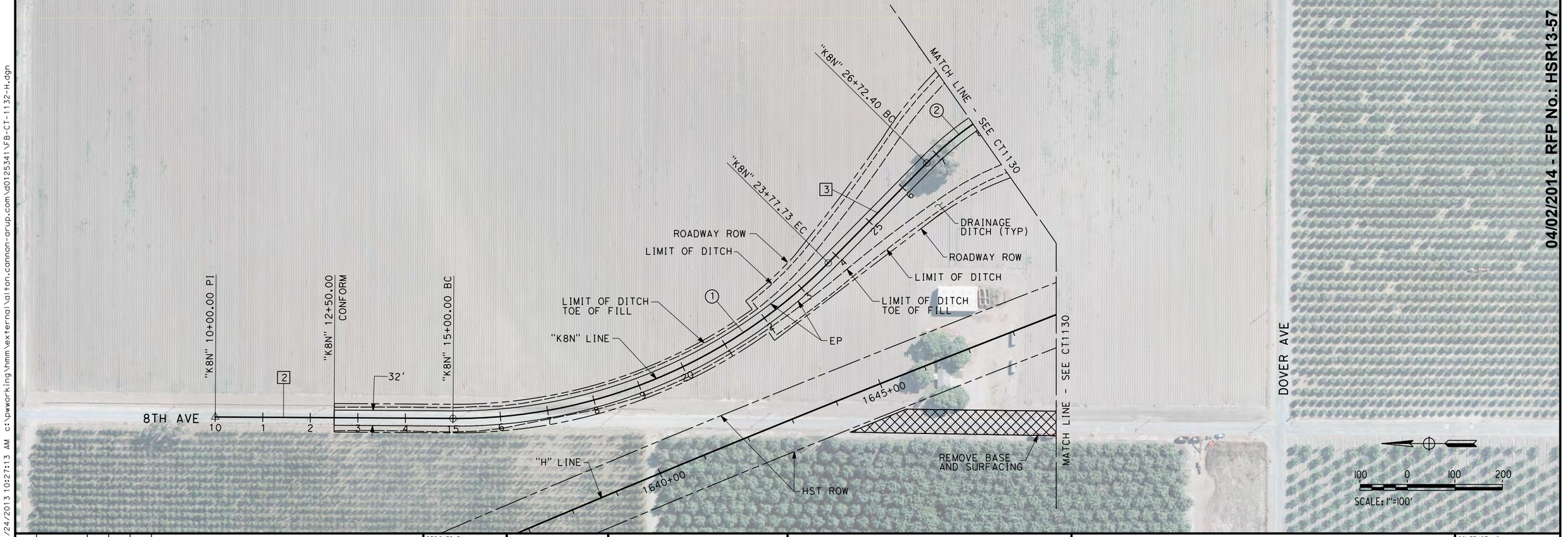
CONTRACT NO. HST 06-0003
DRAWING NO. CT1131
SCALE AS SHOWN
SHEET NO. 11 OF 60

LINE DATA

NO.	BEARING	DISTANCE
2	S00°21'19"W	500.00'
3	S45°21'47"E	294.67'

CURVE DATA

NO.	R	Δ	T	L
(1)	1100.00'	45°43'06"	463.74'	877.73'
(2)	700.00'	8°11'06"	294.06'	556.77'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

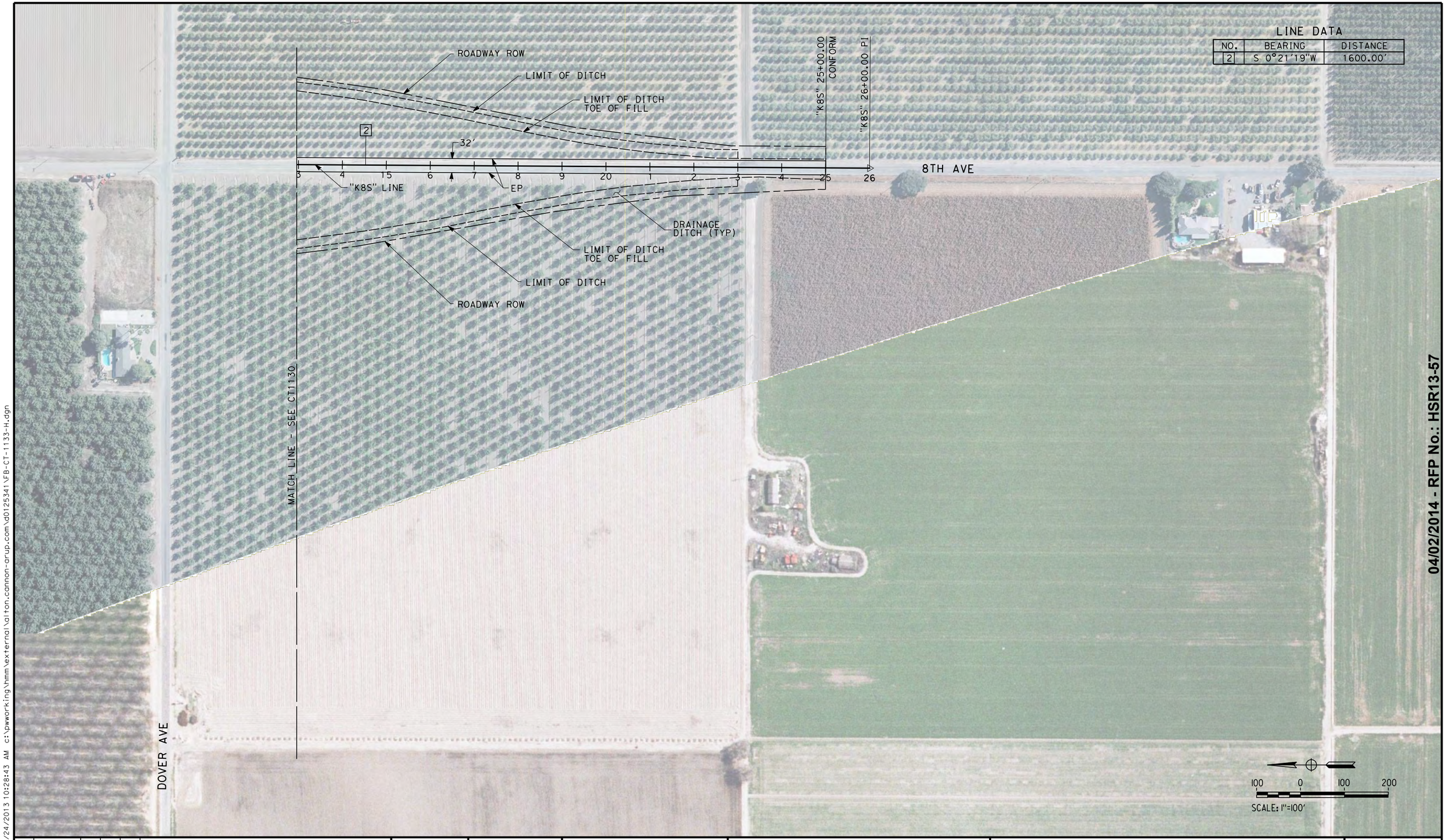
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1132
SCALE AS SHOWN
SHEET NO. 12 OF 60

04/02/2014 - RFP No.: HSR13-57

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (SOUTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1133
SCALE AS SHOWN
SHEET NO. 13 OF 60

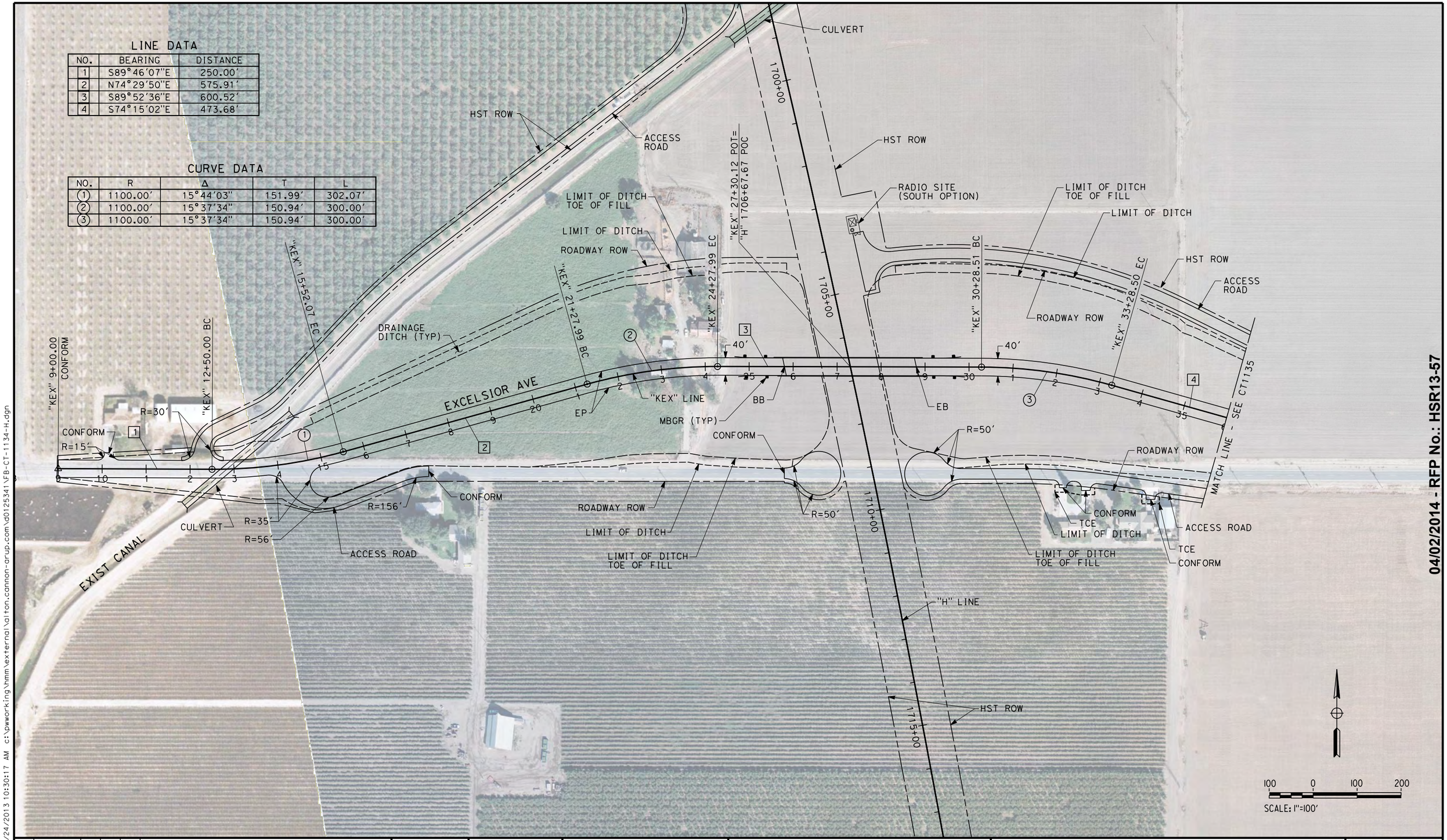
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LINE DATA

NO.	BEARING	DISTANCE
1	S89°46'07"E	250.00'
2	N74°29'50"E	575.91'
3	S89°52'36"E	600.52'
4	S74°15'02"E	473.68'

CURVE DATA

NO.	R	Δ	T	L
(1)	1100.00'	15°44'03"	151.99'	302.07'
(2)	1100.00'	15°37'34"	150.94'	300.00'
(3)	1100.00'	15°37'34"	150.94'	300.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1134
SCALE AS SHOWN
SHEET NO. 14 OF 60

04/02/2014 - RFP No.: HSR13-57

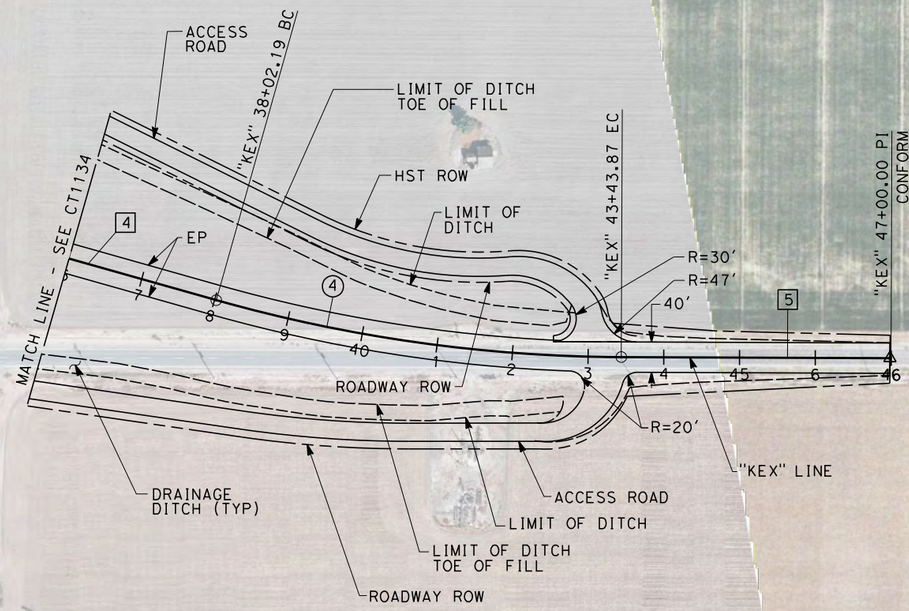
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LINE DATA

NO.	BEARING	DISTANCE
4	S74°15'02"E	473.68'
5	S89°46'07"E	354.63'

CURVE DATA

NO.	R	Δ	T	L
(4)	2000.00'	15°31'05"	272.51'	541.68'



100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

12/24/2013 10:31:04 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1135-H.dgn

alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

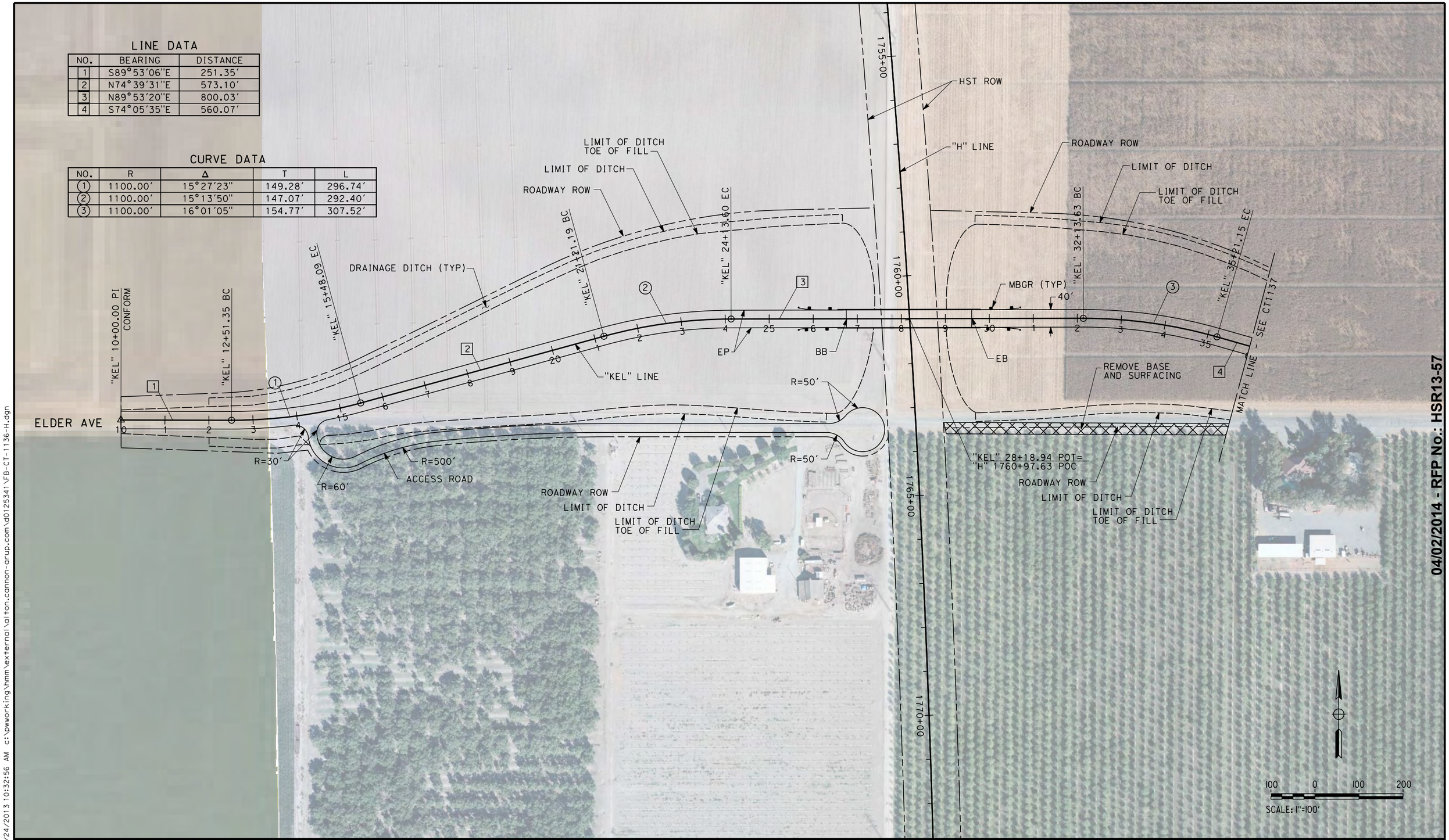
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1135
SCALE AS SHOWN
SHEET NO. 15 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°53'06"E	251.35'
2	N74°39'31"E	573.10'
3	N89°53'20"E	800.03'
4	S74°05'35"E	560.07'

CURVE DATA

NO.	R	Δ	T	L
(1)	1100.00'	15°27'23"	149.28'	296.74'
(2)	1100.00'	15°13'50"	147.07'	292.40'
(3)	1100.00'	16°01'05"	154.77'	307.52'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1136
SCALE AS SHOWN
SHEET NO. 16 OF 60

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
4	S74°05'35"E	560.07'
5	S89°53'06"E	248.68'

CURVE DATA

NO.	R	Δ	T	L
(4)	1100.00'	15°47'31"	152.56'	303.18'



04/02/2014 - RFP No.: HSR13-57

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alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1137
SCALE AS SHOWN
SHEET NO. 17 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	N89°18'29"E	436.28'
2	N73°40'56"E	607.67'
3	N89°18'29"E	772.56'

NO.	R	Δ	T	L
(1)	1400.00'	15°37'34"	192.10'	381.82'
(2)	1400.00'	15°37'34"	192.10'	381.82'
(3)	1400.00'	15°37'34"	192.10'	381.82'

"KFL" 6+00.00 PI CONFORM
"KFL" 12+09.52 BC
R=30'
R=33'
R=30'
R=30'
"KFL" 15+91.34 EC
"KFL" 21+44.12 BC
ACCESS ROAD
DRAINAGE DITCH (TYP)
ROADWAY ROW
HST ROW
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
"KFL" 25+25.93 EC
TRACTION POWER FACILITY (NORTH OPTION)
"H" LINE
HST ROW
1810+00
"KFL" 29+34.77 POT= "H" 1814+88.45 POT
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
MBGR (TYP)
40'
"KFL" 32+43.60 BC
EP
EB
BB
"KFL" LINE
FLINT AVE
1815+00
MATCH LINE - SEE CT1139
ACCESS ROAD
CONFORM
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
R=50'
CONFORM
ACCESS ROAD
R=30'
HST ROW
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
CANAL REALIGNMENT
TRACTION POWER FACILITY (SOUTH OPTION)
EXIST CANAL
CANAL REALIGNMENT
1820+00
1825+00
100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1138
SCALE AS SHOWN
SHEET NO. 18 OF 60

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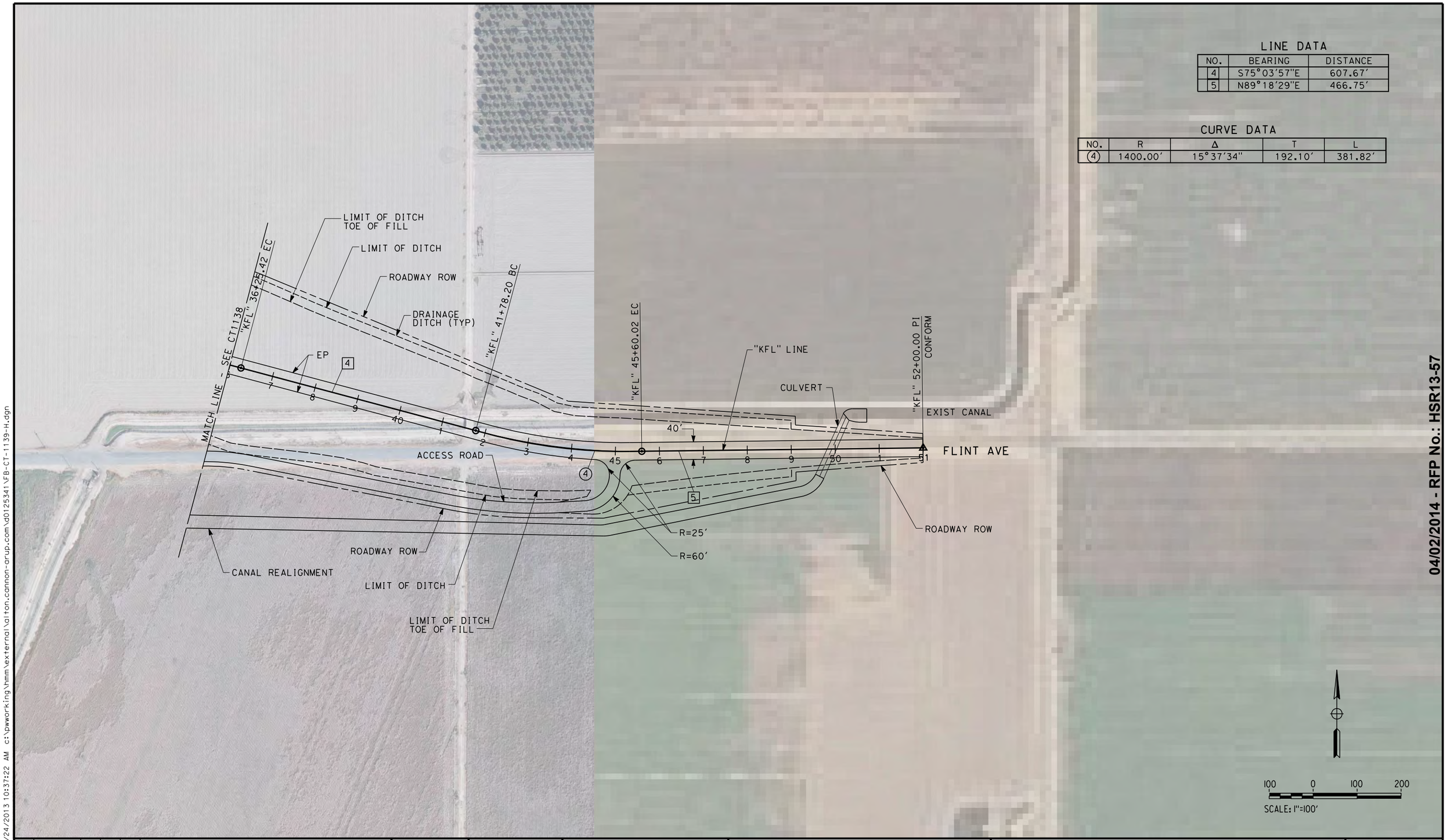
04/02/2014 - RFP No.: HSR13-57

LINE DATA

NO.	BEARING	DISTANCE
4	S75°03'57"E	607.67'
5	N89°18'29"E	466.75'

CURVE DATA

NO.	R	Δ	T	L
(4)	1400.00'	15°37'34"	192.10'	381.82'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1139
SCALE AS SHOWN
SHEET NO. 19 OF 60

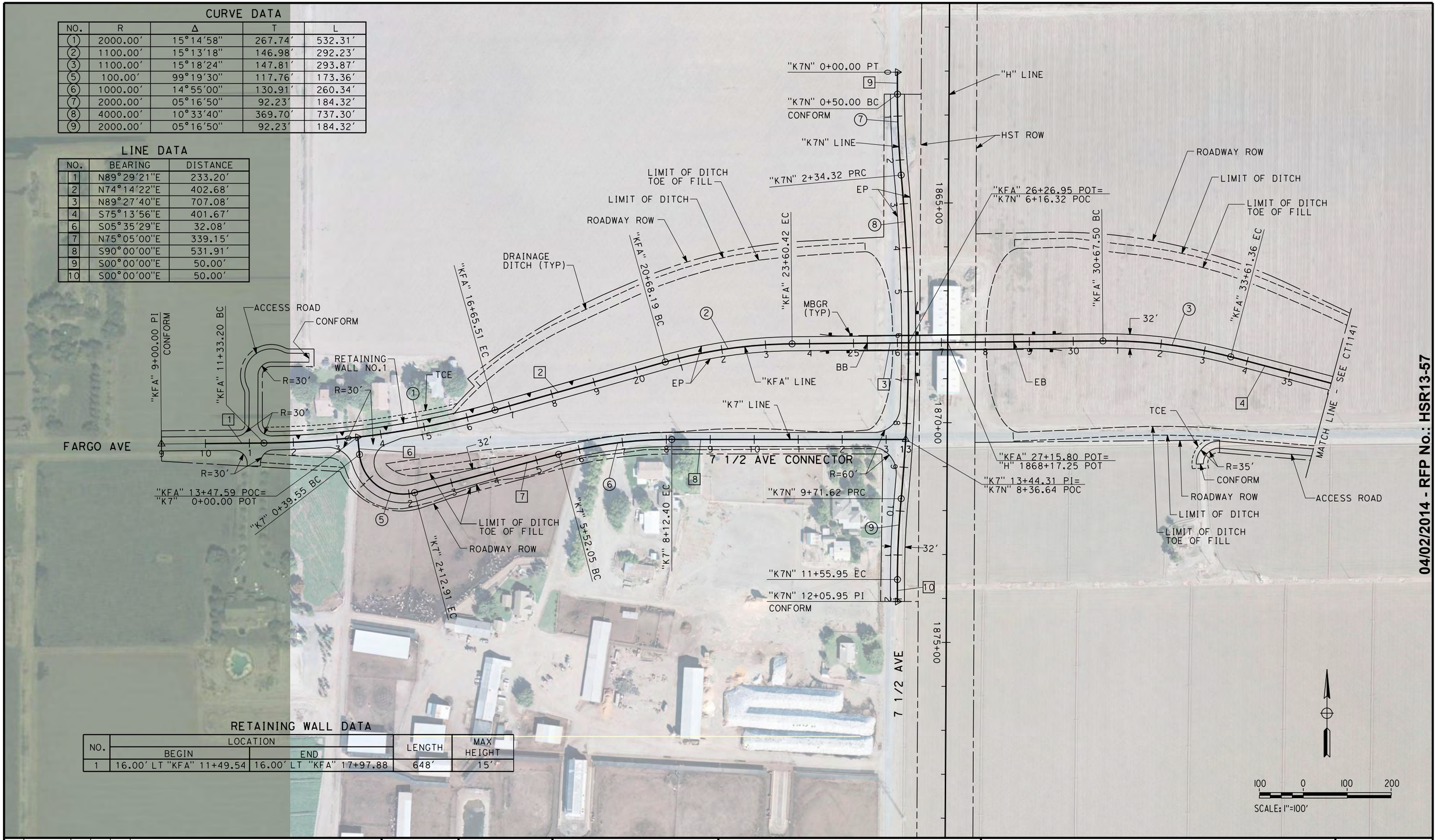
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CURVE DATA

NO.	R	Δ	T	L
(1)	2000.00′	15°14′58"	267.74′	532.31′
(2)	1100.00′	15°13′18"	146.98′	292.23′
(3)	1100.00′	15°18′24"	147.81′	293.87′
(5)	100.00′	99°19′30"	117.76′	173.36′
(6)	1000.00′	14°55′00"	130.91′	260.34′
(7)	2000.00′	05°16′50"	92.23′	184.32′
(8)	4000.00′	10°33′40"	369.70′	737.30′
(9)	2000.00′	05°16′50"	92.23′	184.32′

LINE DATA

NO.	BEARING	DISTANCE
1	N89°29′21"E	233.20′
2	N74°14′22"E	402.68′
3	N89°27′40"E	707.08′
4	S75°13′56"E	401.67′
6	S05°35′29"E	32.08′
7	N75°05′00"E	339.15′
8	S90°00′00"E	531.91′
9	S00°00′00"E	50.00′
10	S00°00′00"E	50.00′



RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	16.00′ LT "KFA" 11+49.54	16.00′ LT "KFA" 17+97.88	648′	15′

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1140
SCALE AS SHOWN
SHEET NO. 20 OF 60



LINE DATA

NO.	BEARING	DISTANCE
4	S75°13'56"E	401.67'
5	N89°29'21"E	303.65'

CURVE DATA

NO.	R	Δ	T	L
(4)	2000.00'	15°16'43"	268.25'	533.33'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1141
SCALE AS SHOWN
SHEET NO. 21 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'53"E	3650.00'

"KHA" 0+00.00 PI

"KHA" 0+88.49 CONFORM

TCE

R=15'

R=60'

R=75'

CONFORM

R=60'

R=75'

DRAINAGE DITCH (TYP)

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

ROADWAY ROW

HANFORD ARMONA RD

1

"KHA" LINE

2020+00

"H" LINE

EXISITNG CANAL

HST ROW

CANAL REALIGNMENT

2025+00

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

MBGR (TYP)

40'

MATCH LINE - SEE CT1145

0 1 2 3 4 5 6 7 8 9 10 1 2 3 4 15 6 7 8 9 20 1 2 3 4 25 6

R=25'

CONFORM

TCE

R=25'

CONFORM

TCE

R=30'

EP

BB

CULVERT

EB

2030+00

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

R=60'

TCE

"KHA" 18+24.99 POT= "H" 2029+28.99 POT

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

CONFORM

ACCESS ROAD

2035+00

EXISITNG CANAL

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1144
SCALE AS SHOWN
SHEET NO. 22 OF 60

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1145
SCALE AS SHOWN
SHEET NO. 23 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°51'12"E	3600.00'

"KHO" 0+00.00 PI

"KHO" 1+00.00 CONFORM

R=30'

CONFORM

TOE OF FILL

CONFORM

TCE

R=30'

R=30'

CONFORM

TCE

R=30'

ACCESS ROAD

ACCESS ROAD

CONFORM

R=15'

R=100'

R=84'

R=25'

TCE

RET WALL NO.1

40'

HOUSTON AVE

1

EP

BB

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

TCE

ROADWAY ROW

ROADWAY ROW

"KHO" LINE

EXIST CANAL

2075+00

"H" LINE

HST ROW

2080+00

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

MBGR (TYP)

40'

EB

EP

MATCH LINE - SEE CT1147

2085+00

"KHO" 17+99.99 POT= "H" 2083+93.12 POT

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

EXIST CANAL

2090+00

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00' LT 6+25.03	20.00' LT 12+00.00	575'	30'

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON

DRAWN BY E. SUDHAUSEN

CHECKED BY S. BROWN

IN CHARGE R. COFFIN

DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP

CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HOUSTON AVE

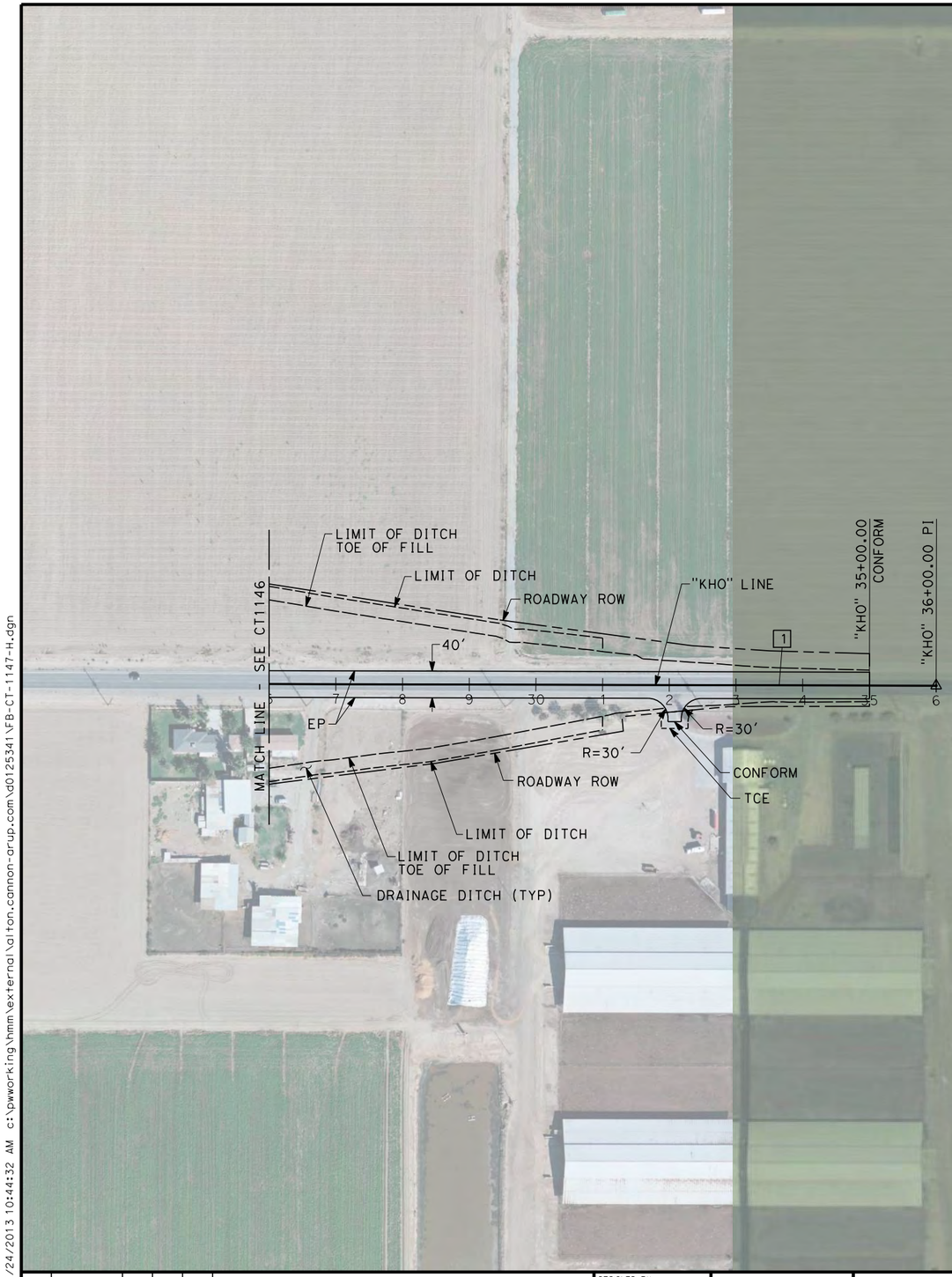
CONTRACT NO. HSR 06-0003

DRAWING NO. CT1146

SCALE AS SHOWN

SHEET NO. 24 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°51'12"E	3600.00'

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1147
SCALE AS SHOWN
SHEET NO. 25 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°45'10"E	3600.00'

EXIST CANAL
"H" LINE
2130+00
HST ROW
CANAL REALIGNMENT
RETENTION BASIN
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
DRAINAGE DITCH (TYP)
"KIO" 0+00.00 PI
32'
"KIO" LINE
1
IONA AVE
2135+00
"KIO" 18+00.00 POT= "H" 2136+82.40 POT
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
32'
EP
BB
EB
MBGR (TYP)
EP
MATCH LINE - SEE CT1149
"K10" 0+29.73 CONFORM
CULVERT
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
ROADWAY ROW
LIMIT OF DITCH
HST ROW
LIMIT OF DITCH TOE OF FILL
ACCESS ROAD
2140+00
"H" 2144+63.00 POT =
"K3" 2073+97.00 POT =
"K4" 2074+96.00 POT =
EXIST CANAL
2144+63

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

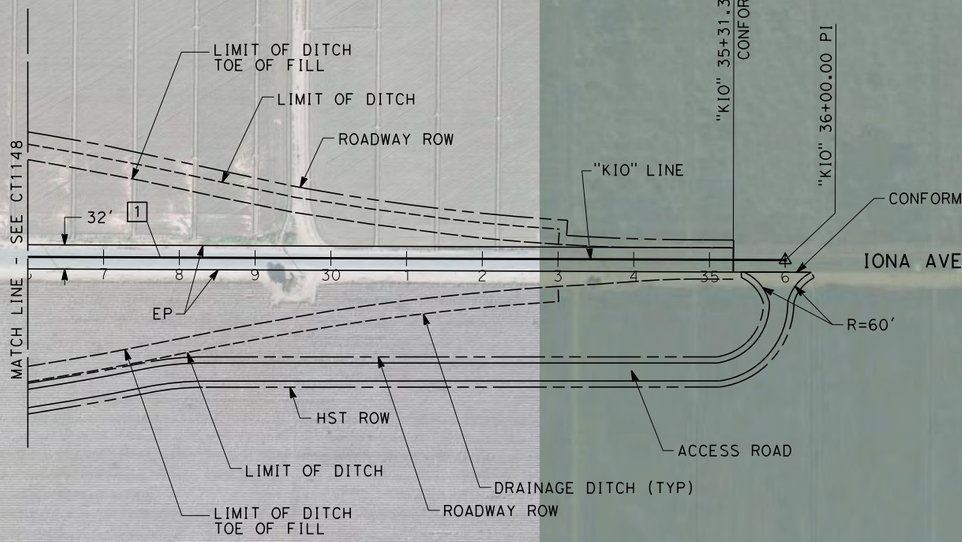
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1148
SCALE AS SHOWN
SHEET NO. 26 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°45'10"E	3600.00'



100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

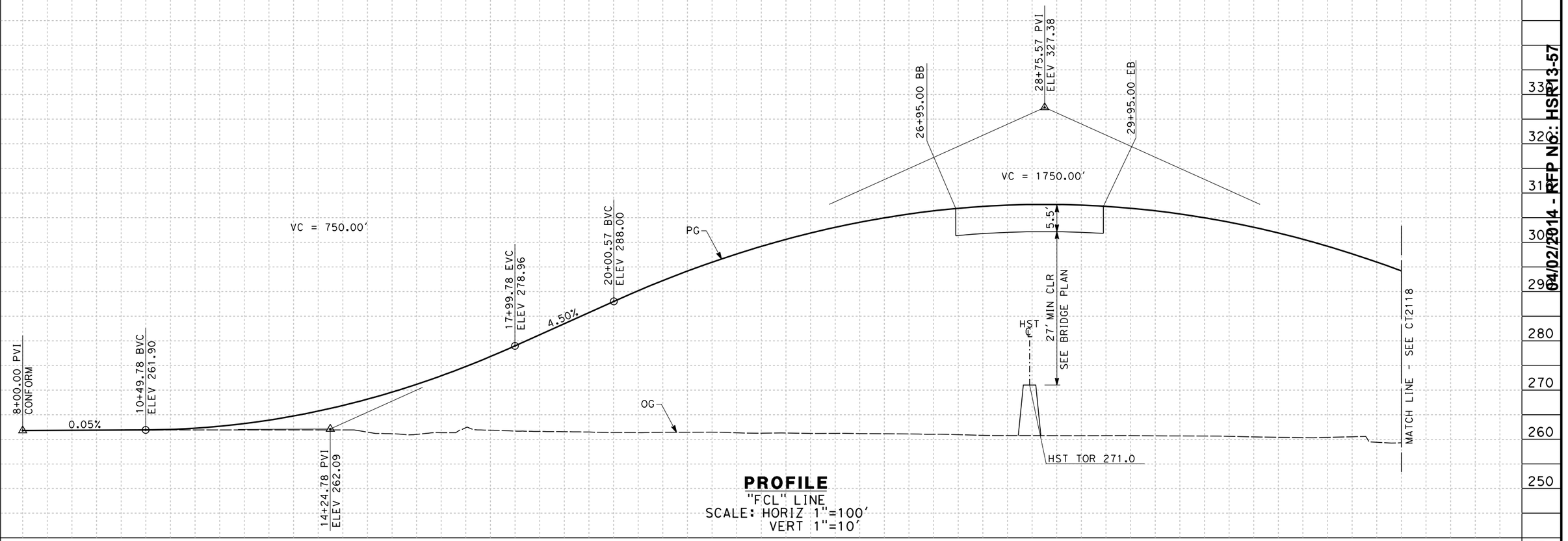
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1149
SCALE AS SHOWN
SHEET NO. 27 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"FCL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A, CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

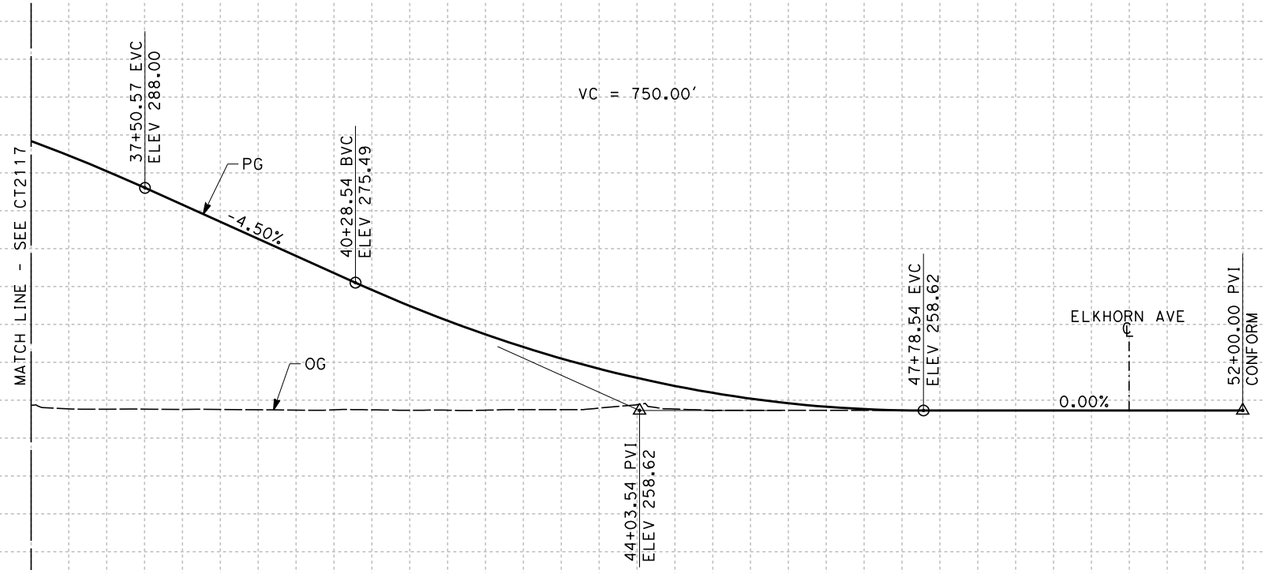
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2117
SCALE AS SHOWN
SHEET NO. 28 OF 60

04/02/2014 - RFP NO: HSR13-57

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eron.sudhausen



PROFILE
"FCL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY Exc																		
CY Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
S CLOVIS AVE

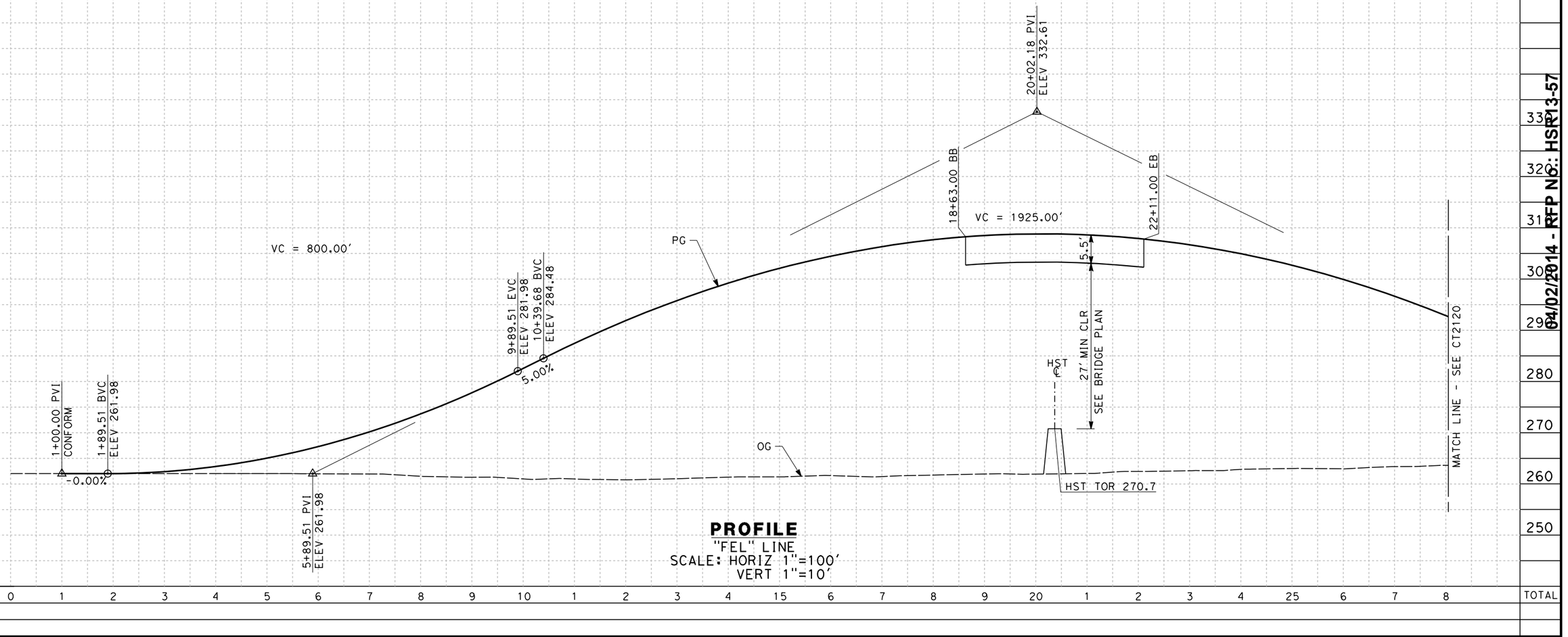
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2118
SCALE AS SHOWN
SHEET NO. 29 OF 60

04/02/2014 - RFP No: HSR13-57

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eron.sudhausen

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"FEL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
CY Exc																														
CY Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

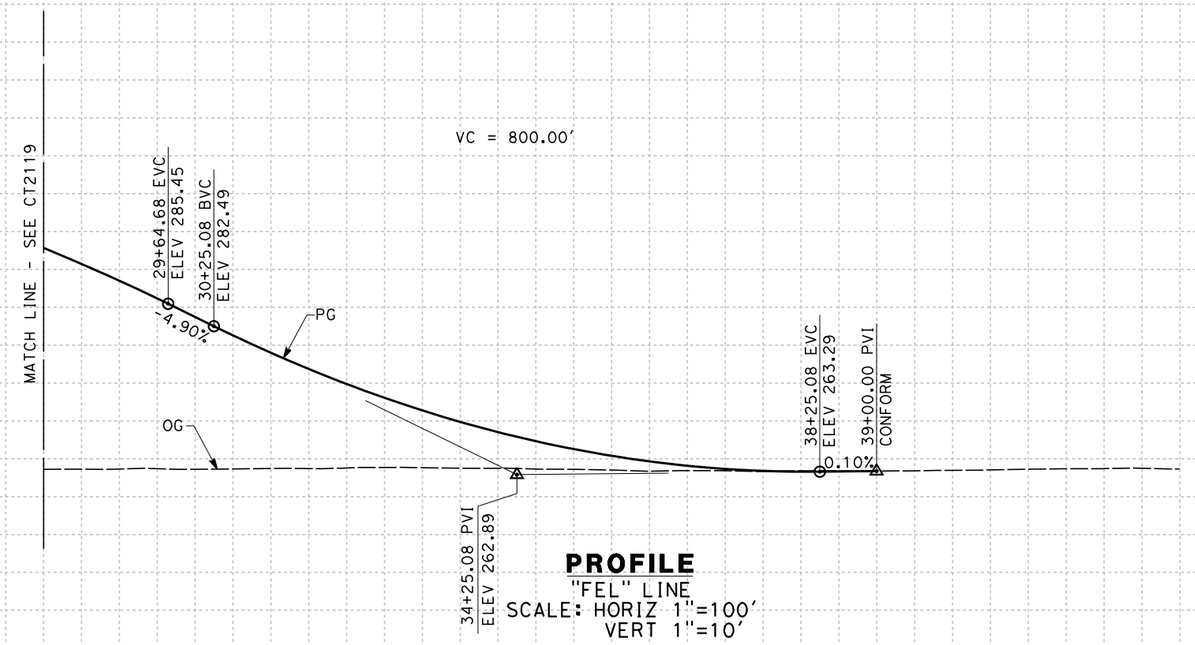
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2119
SCALE AS SHOWN
SHEET NO. 30 OF 60

04/02/2014 - RFP No: HSR13-57

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04/02/2014 - RFP No: HSR13-57



PROFILE
"FEL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
CY Exc																		
CY Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

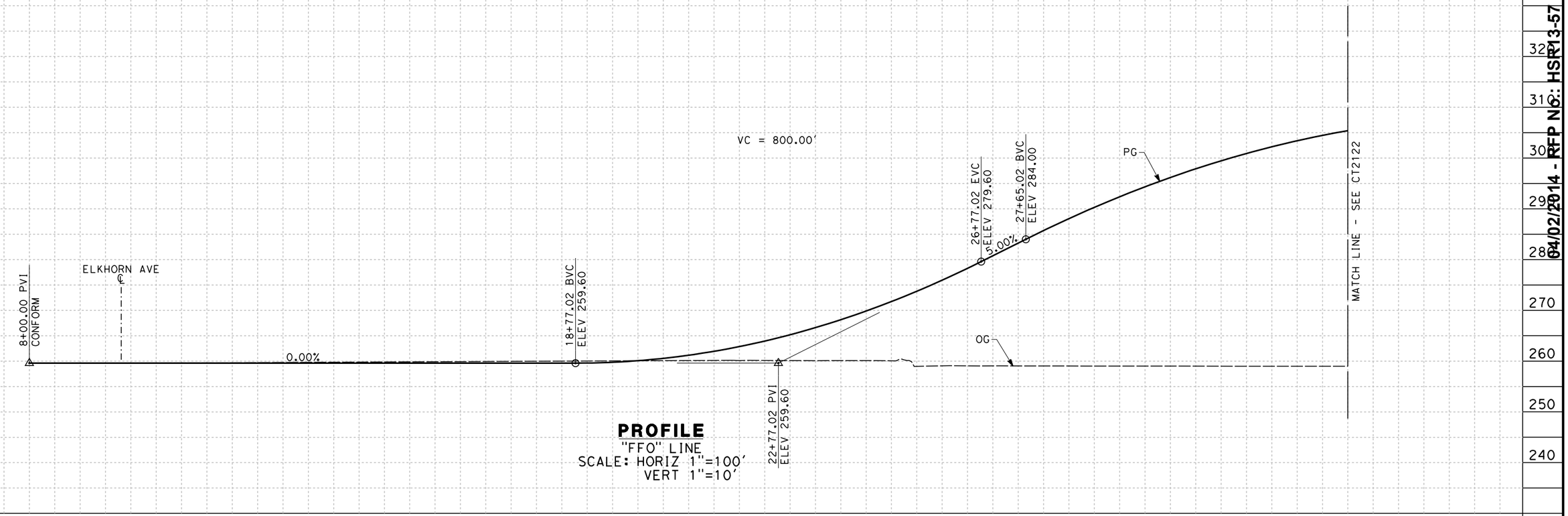
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2120
SCALE AS SHOWN
SHEET NO. 31 OF 60

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"FFO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY Exc																												
CY Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

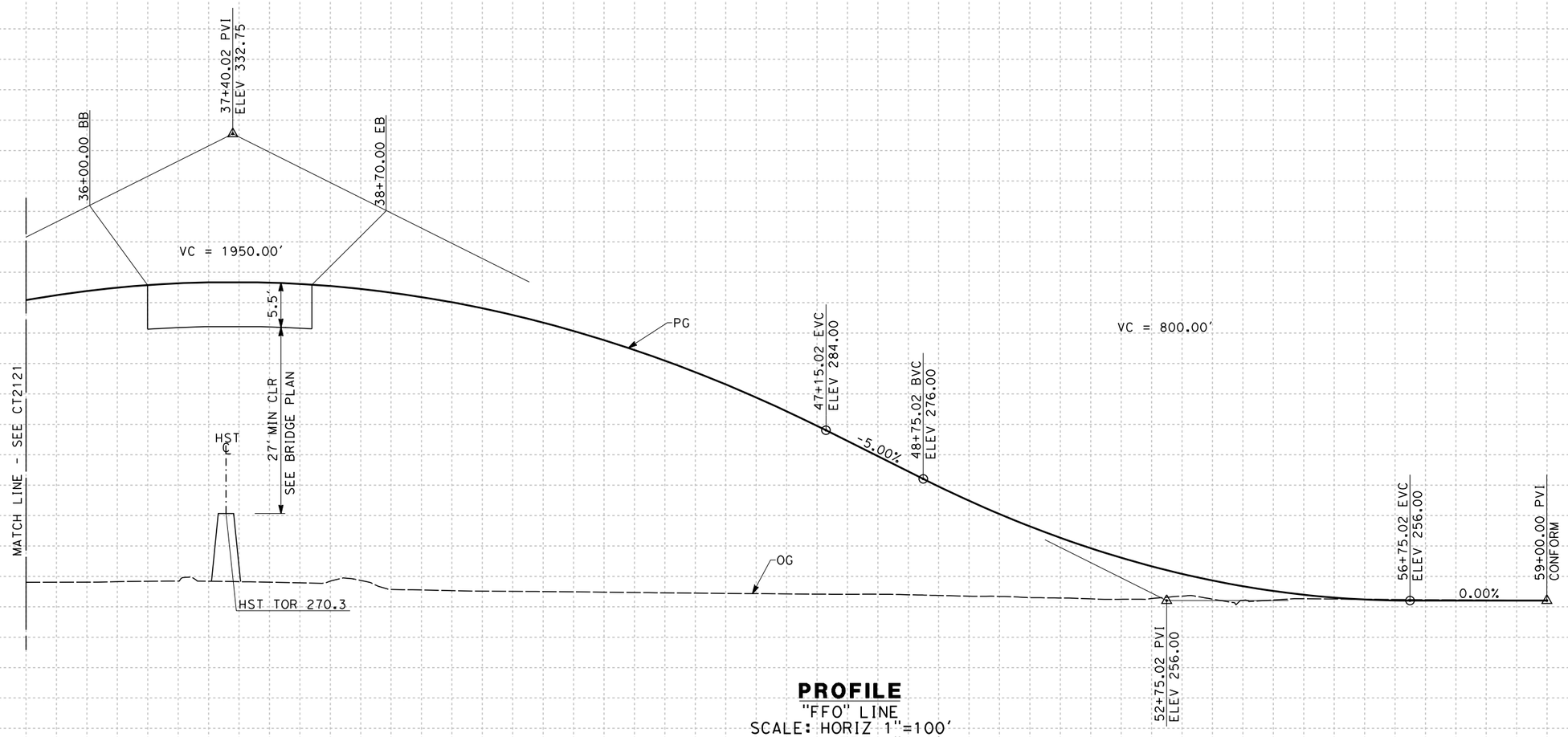
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2121
SCALE AS SHOWN
SHEET NO. 32 OF 60

RFP No: HSR13-57
04/02/2014 - RFP No

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PROFILE
"FFO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
S FOWLER AVE

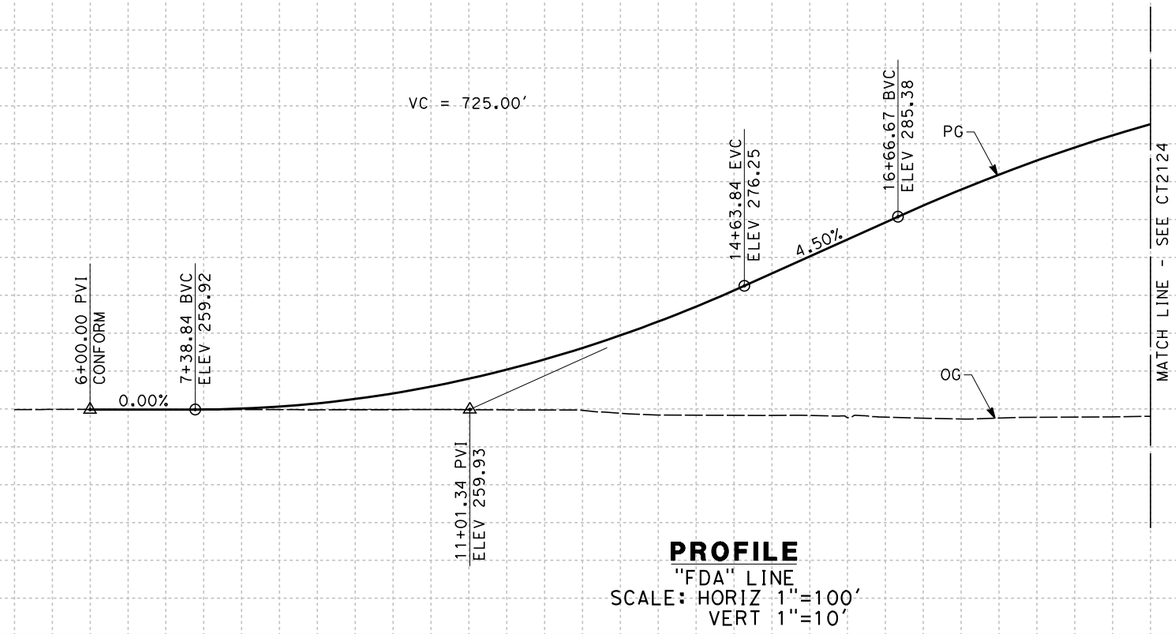
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2122
SCALE AS SHOWN
SHEET NO. 33 OF 60

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"FDA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

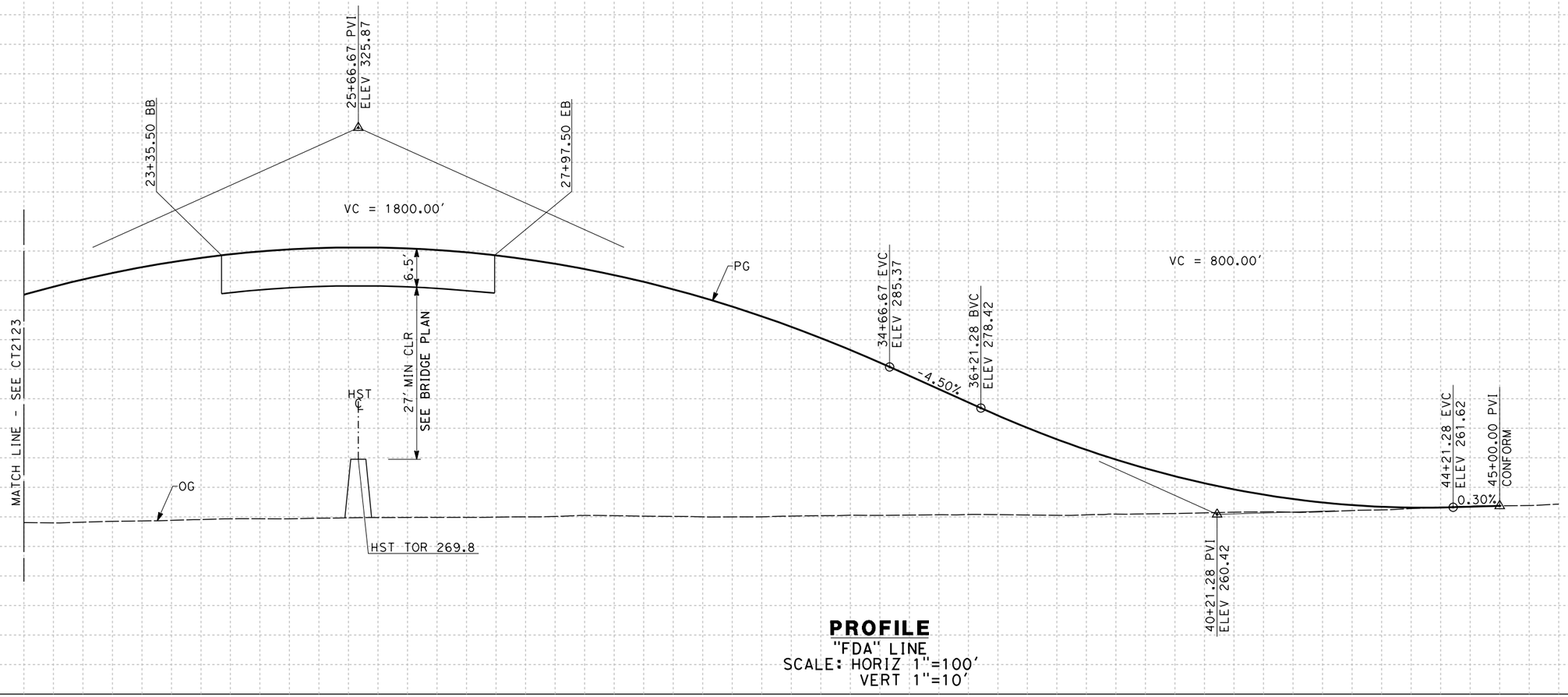
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2123
SCALE AS SHOWN
SHEET NO. 34 OF 60

04/02/2014 - RFP No: HSR13-57

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PROFILE
"FDA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
E DAVIS AVE

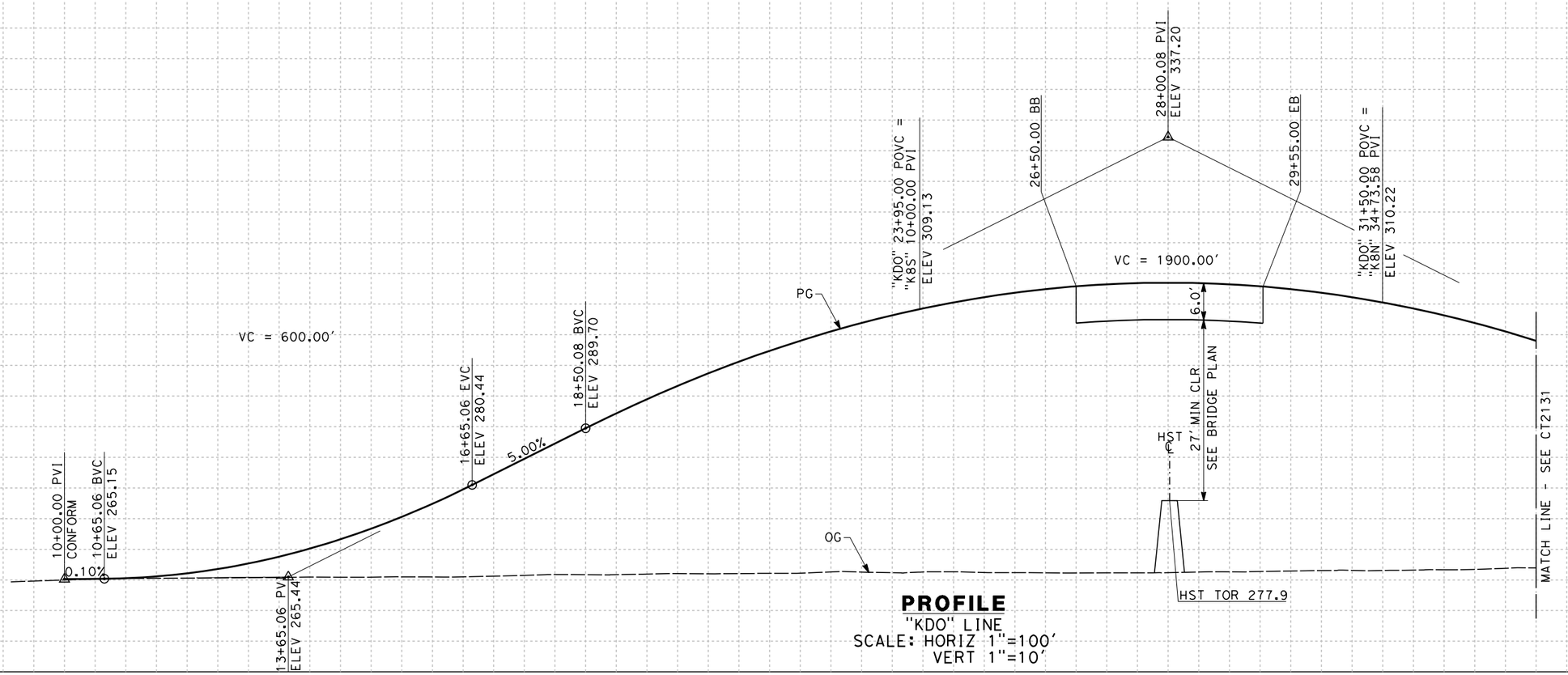
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2124
SCALE AS SHOWN
SHEET NO. 35 OF 60

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KDO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

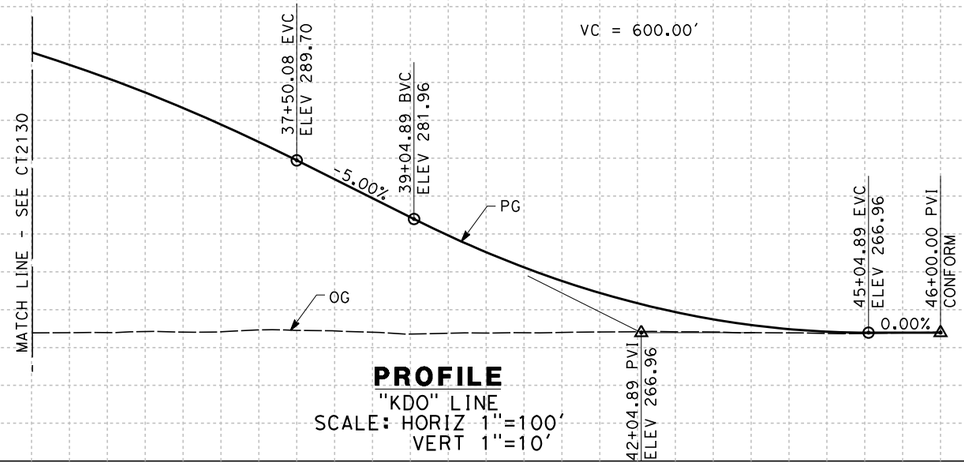
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
DOVER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2130
SCALE AS SHOWN
SHEET NO. 36 OF 60

04/02/2014 - RFP No: HSR13-57

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PROFILE
"KDO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		4	35	6	7	8	9	40	1	2	3	4	45	6										TOTAL
CY	Exc																							
	Emb																							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

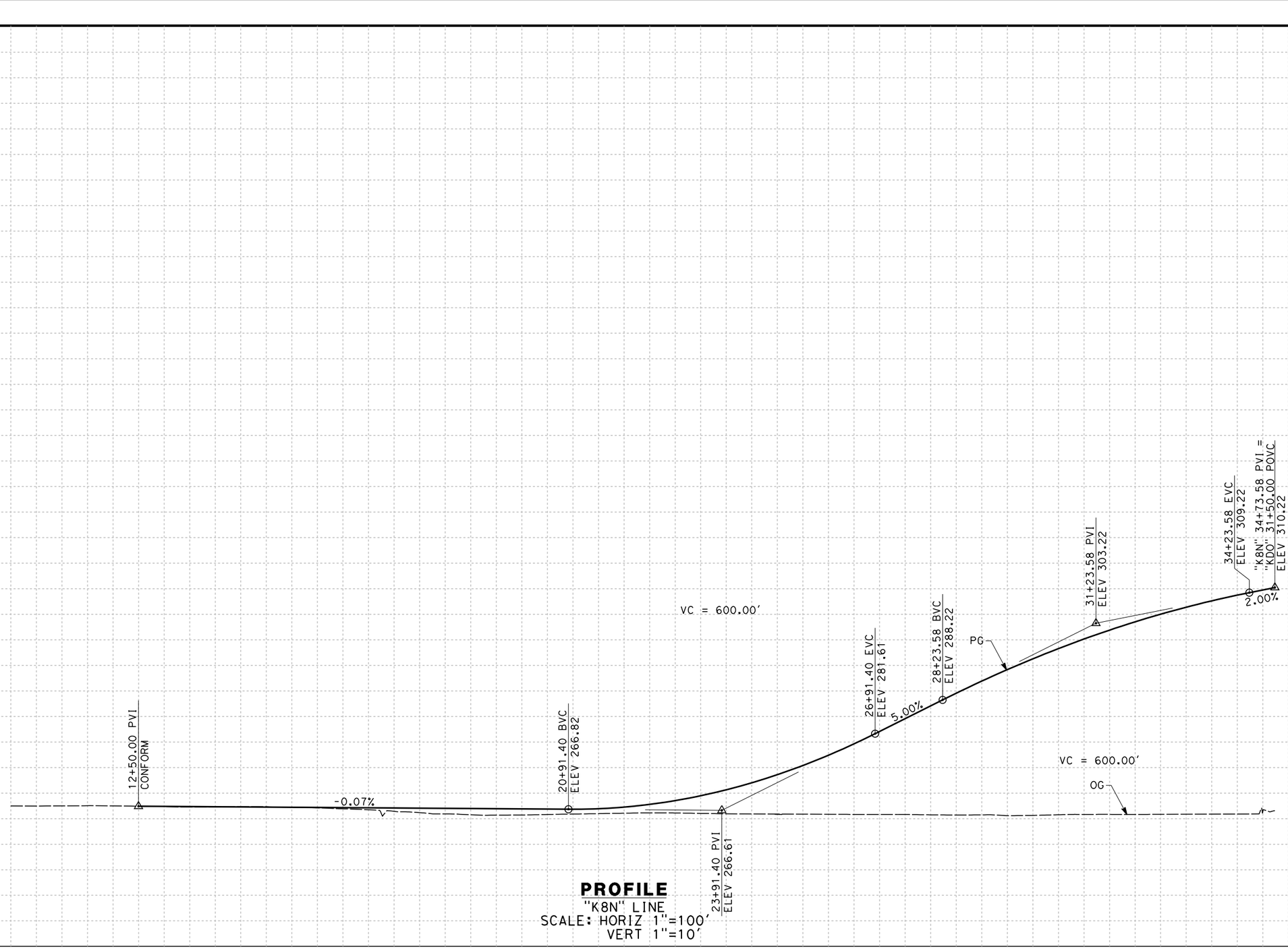
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
DOVER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2131
SCALE AS SHOWN
SHEET NO. 37 OF 60

04/02/2014 - RFP No.: HSR13-57

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PROFILE
"K8N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

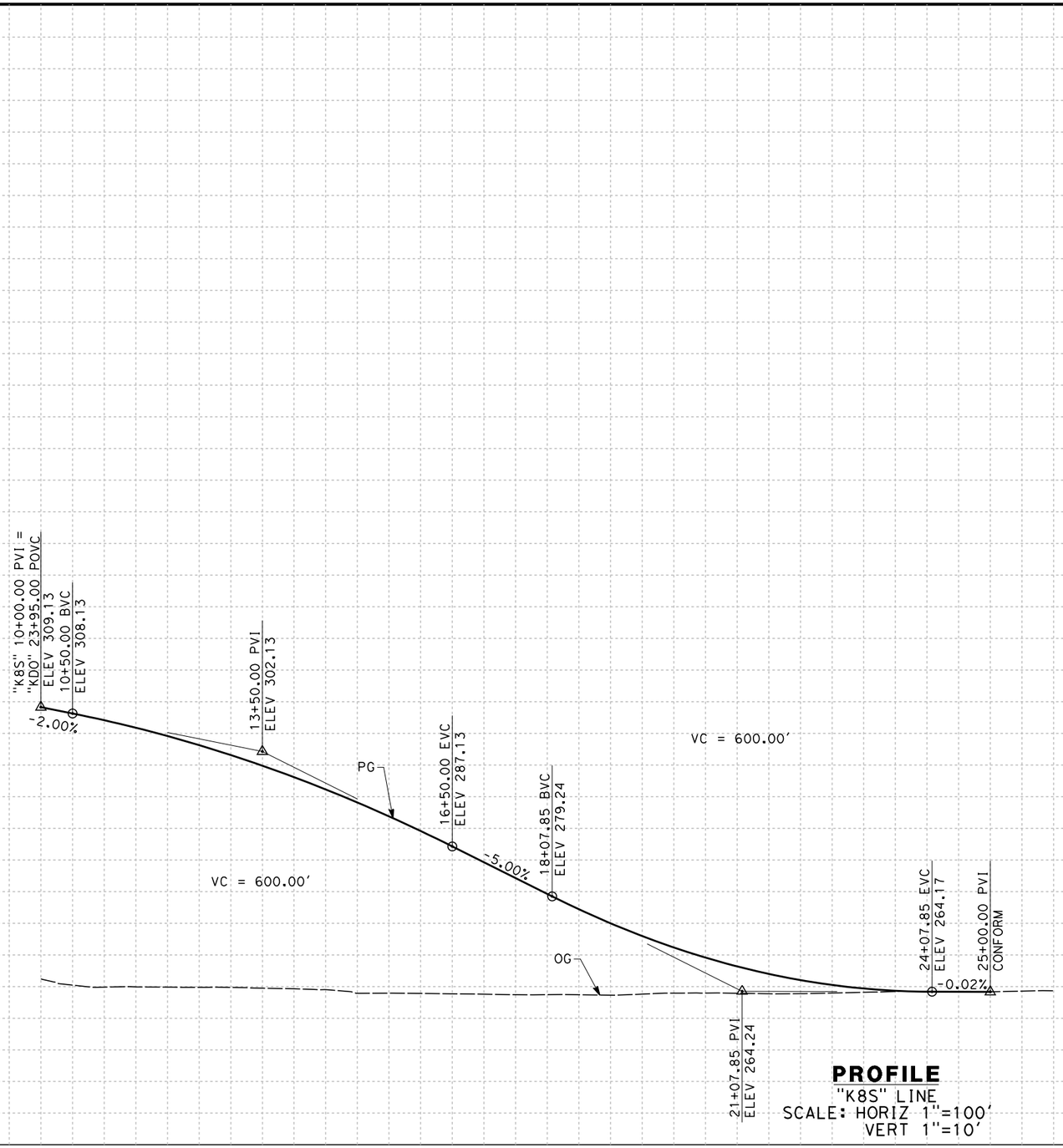
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
8TH AVE (NORTH)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2132
SCALE AS SHOWN
SHEET NO. 38 OF 60

RFP NO: HSR13-57
04/02/2014

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PROFILE
"K8S" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
CY Exc																		
CY Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
8TH AVE (SOUTH)

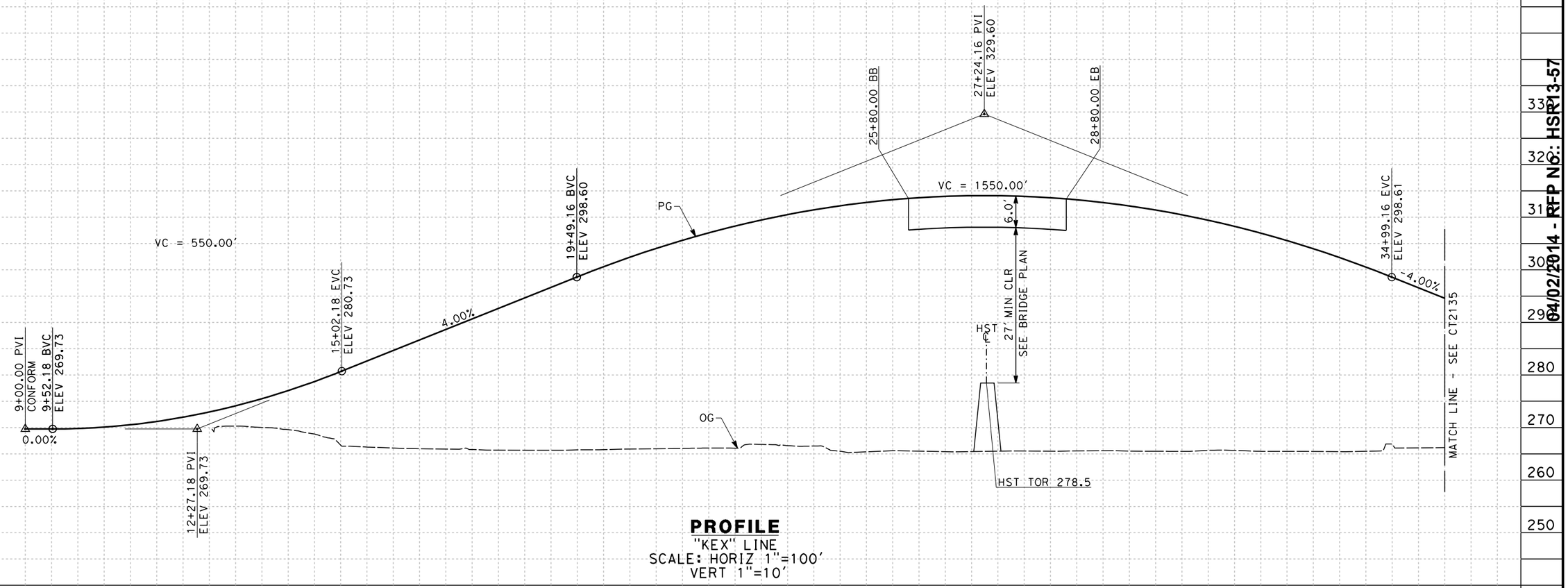
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2133
SCALE AS SHOWN
SHEET NO. 39 OF 60

RFP No.: HSR13-57
04/02/2014

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KEX" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

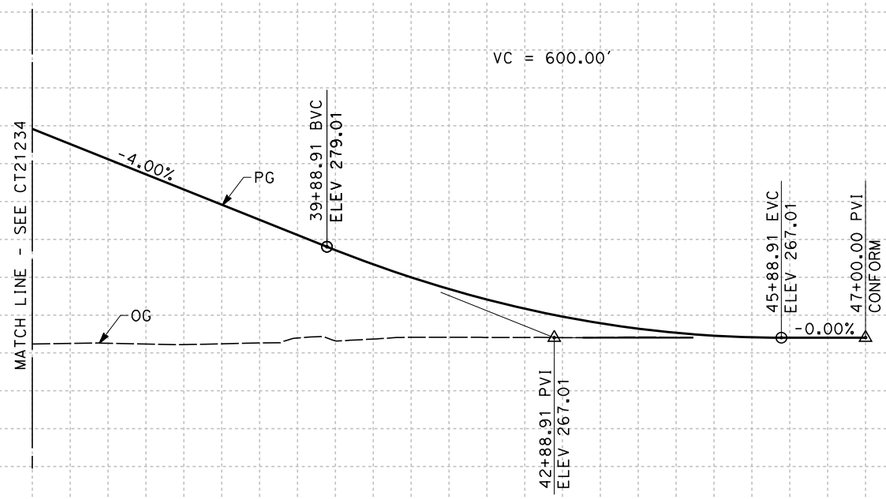
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
EXCELSIOR AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2134
SCALE AS SHOWN
SHEET NO. 40 OF 60

04/02/2014 - RFP No: HSR13-57

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PROFILE
"KEX" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		6	7	8	9	40	1	2	3	4	45	6	7	TOTAL
CY	Exc													
	Emb													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
EXCELSIOR AVE

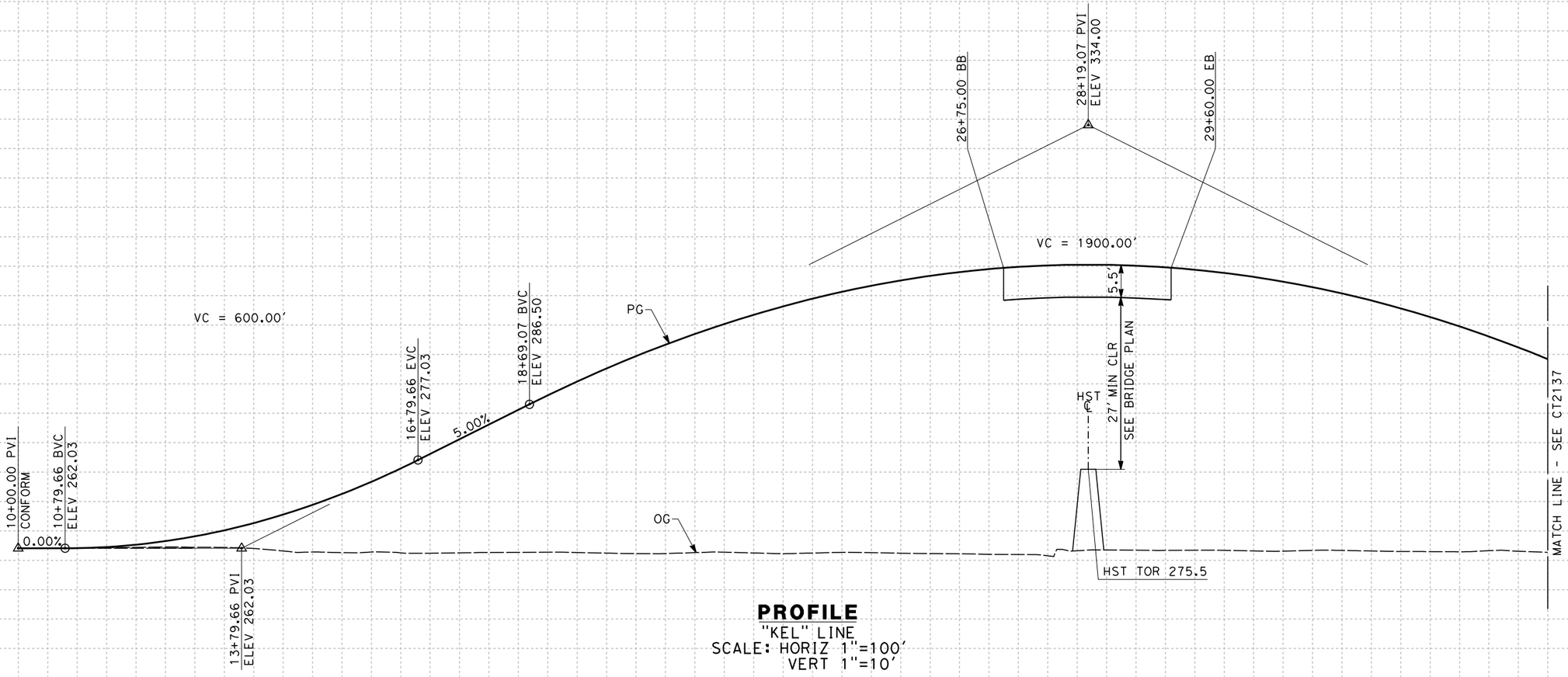
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2135
SCALE AS SHOWN
SHEET NO. 41 OF 60

04/02/2014 - RFP No: HSR13-57

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KEL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																												
CY Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
ELDER AVE

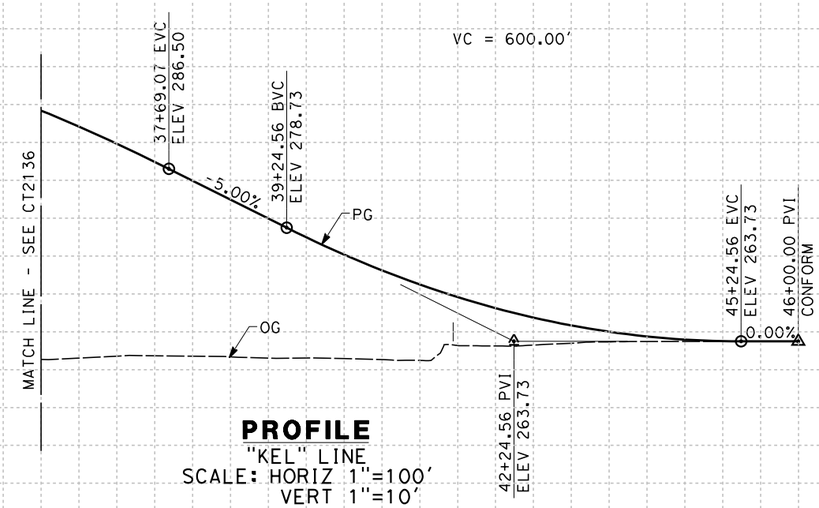
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2136
SCALE AS SHOWN
SHEET NO. 42 OF 60

RFP No: HSR13-57
04/02/2014 - RFP No:

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eron.sudhausen

04/02/2014 - RFP No.: HSR13-57



PROFILE
"KEL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	45	6	7	TOTAL
CY Exc													
CY Emb													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

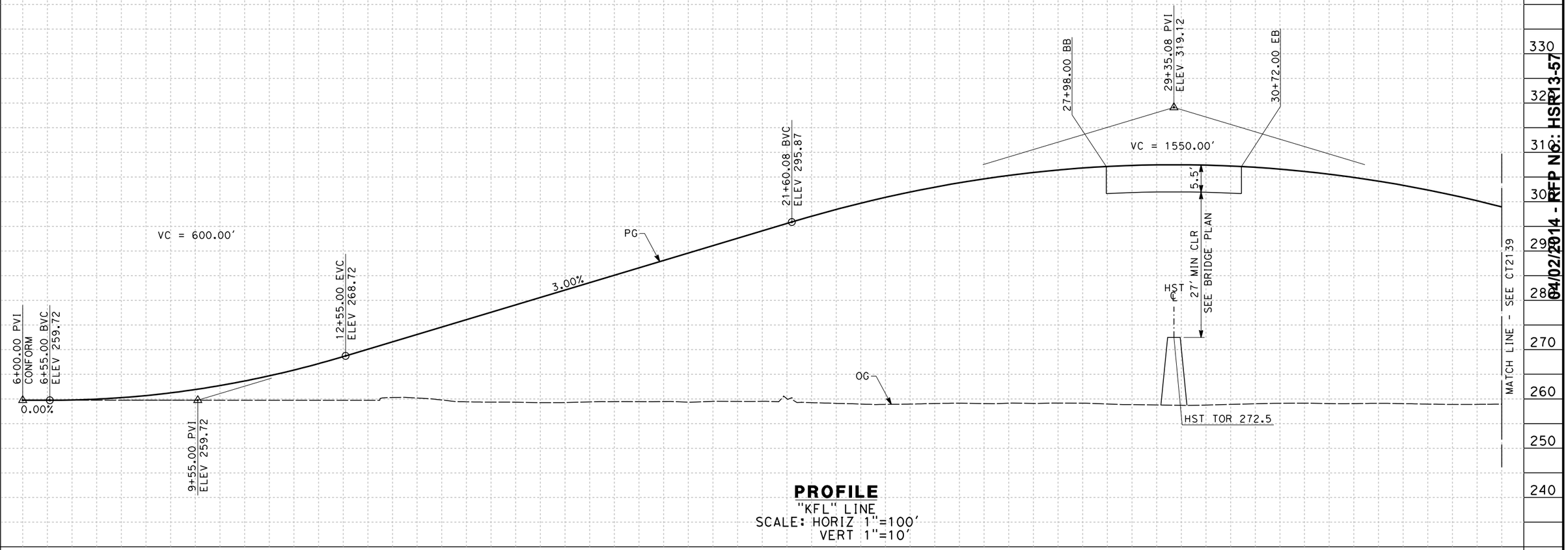
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2137
SCALE AS SHOWN
SHEET NO. 43 OF 60

NOTES:
1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KFL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

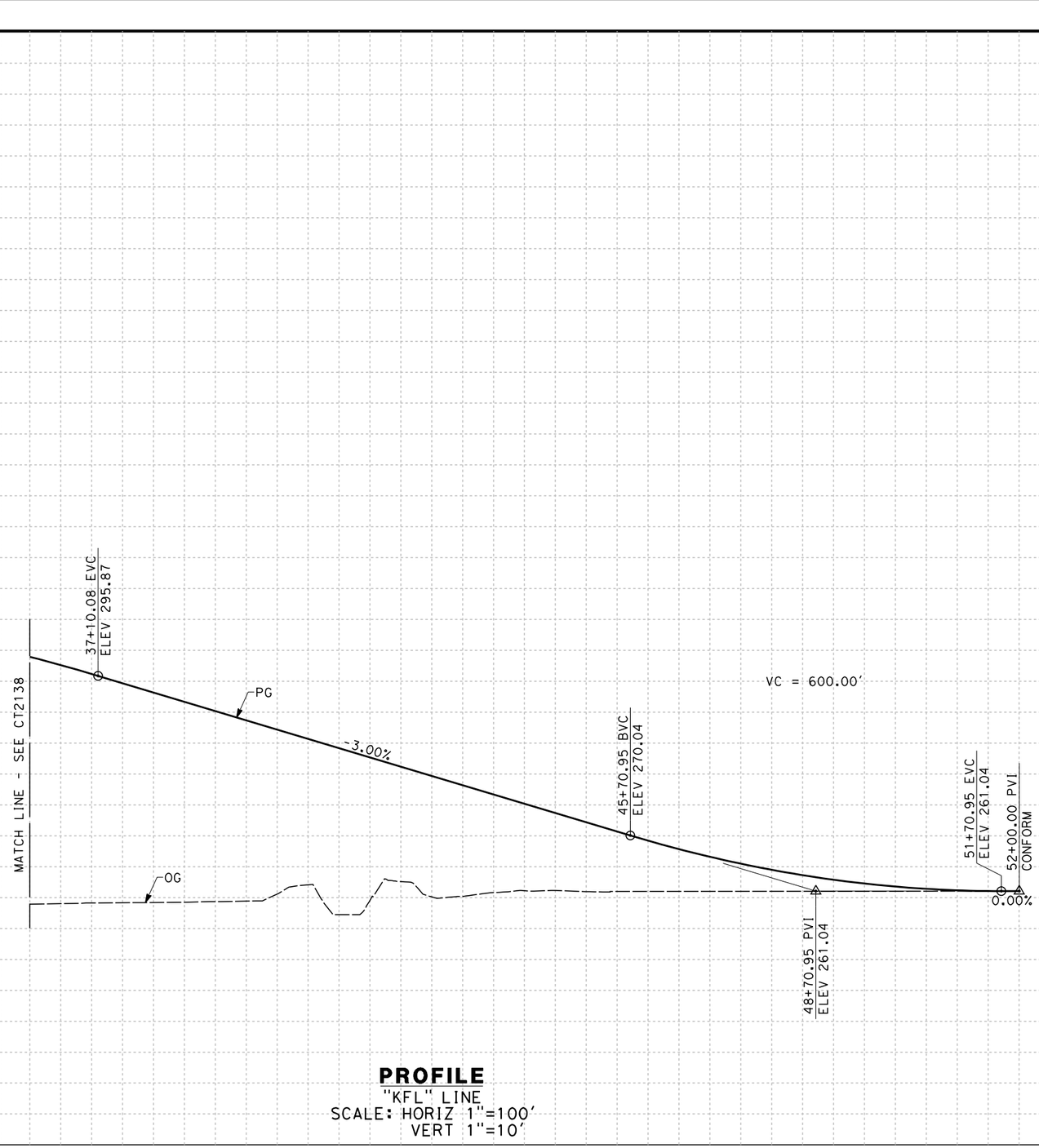
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2138
SCALE AS SHOWN
SHEET NO. 44 OF 60

RFP No: HSR13-57
04/02/2014

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eron.sudhausen



PROFILE
"KFL" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
CY	Exc																		
	Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
FLINT AVE

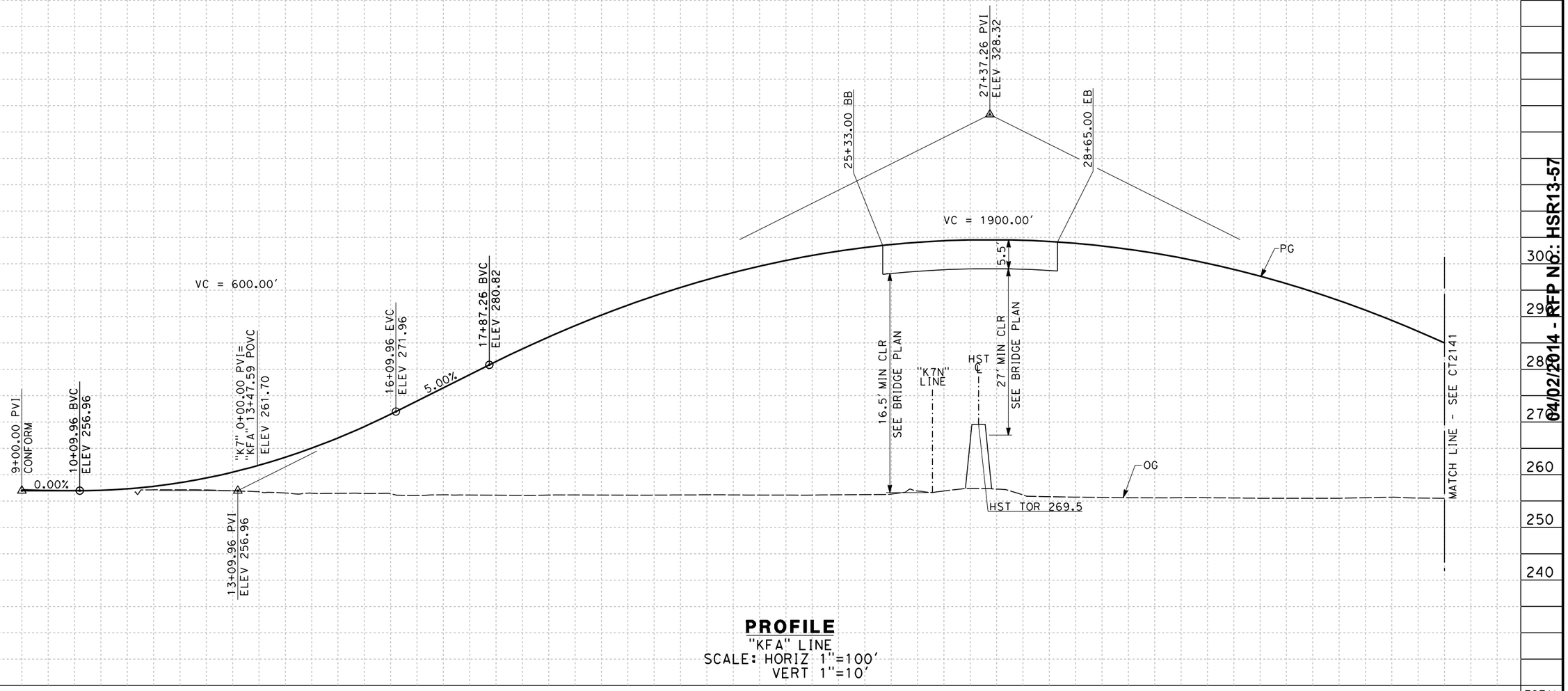
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2139
SCALE AS SHOWN
SHEET NO. 45 OF 60

04/02/2014 - RFP No: HSR13-57

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KFA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

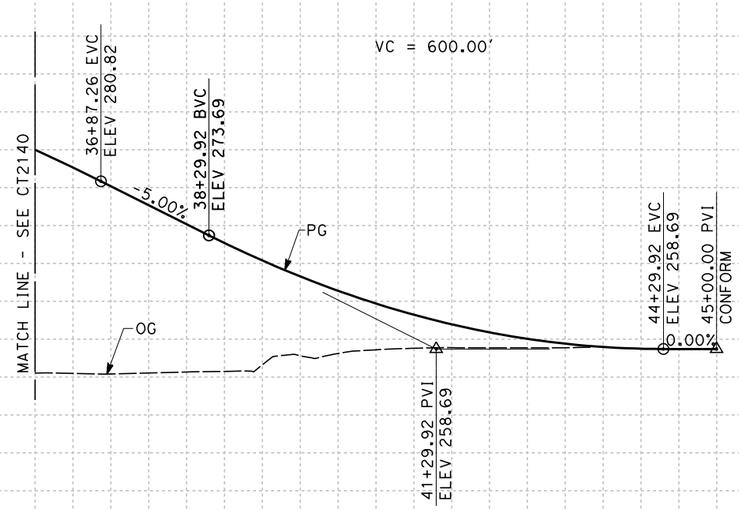
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2140
SCALE AS SHOWN
SHEET NO. 46 OF 60

RFP No: HSR13-57
04/02/2014

$FILE$ $TIME$ $DATE$ $USER$



PROFILE

"KFA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	5	TOTAL
CY Exc											
CY Emb											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
FARGO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2141
SCALE AS SHOWN
SHEET NO. 47 OF 60

04/02/2014 - RFP NO.: HSR13-57

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04/02/2014 - RFP No.: HSR13-57



PROFILE
"K7" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	TOTAL
CY Exc																
CY Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

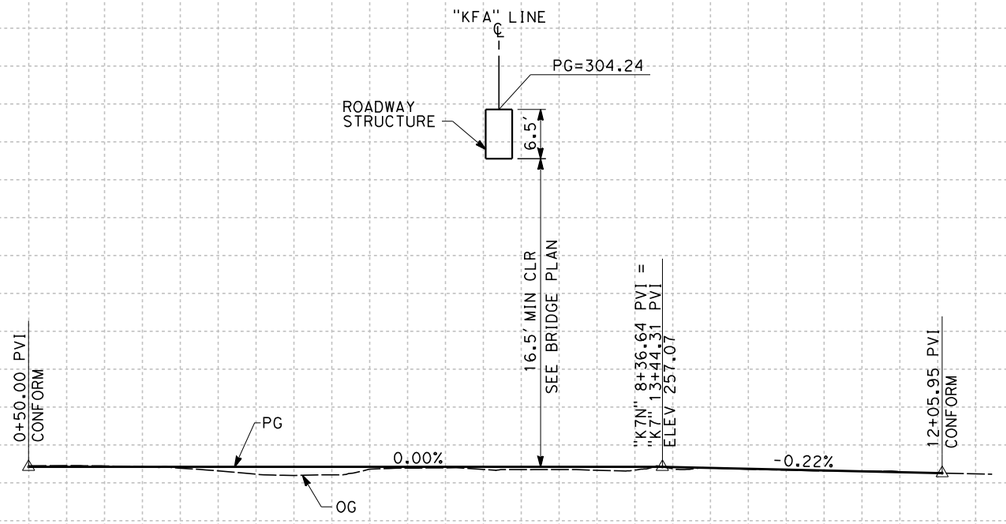
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
7 1/2 AVE CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2142
SCALE AS SHOWN
SHEET NO. 48 OF 60

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NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE.



PROFILE

"K7N" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		0	1	2	3	4	5	6	7	8	9	10	1	2	TOTAL
CY	Exc														
	Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

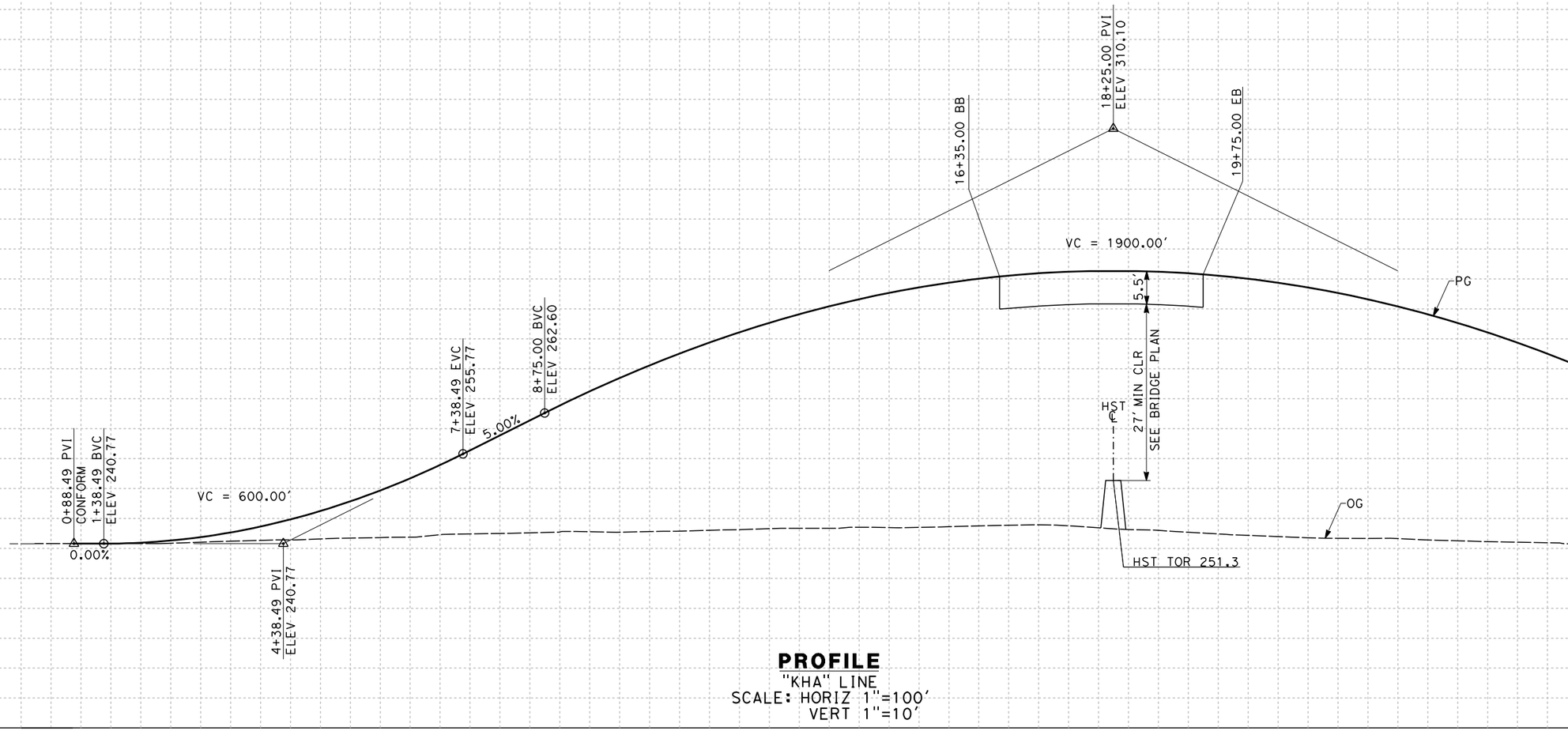
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
7½AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2143
SCALE AS SHOWN
SHEET NO. 49 OF 60

04/02/2014 - RFP No.: HSR13-57

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL



PROFILE
"KHA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
CY	Exc																												
	Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
HANFORD ARMONA RD

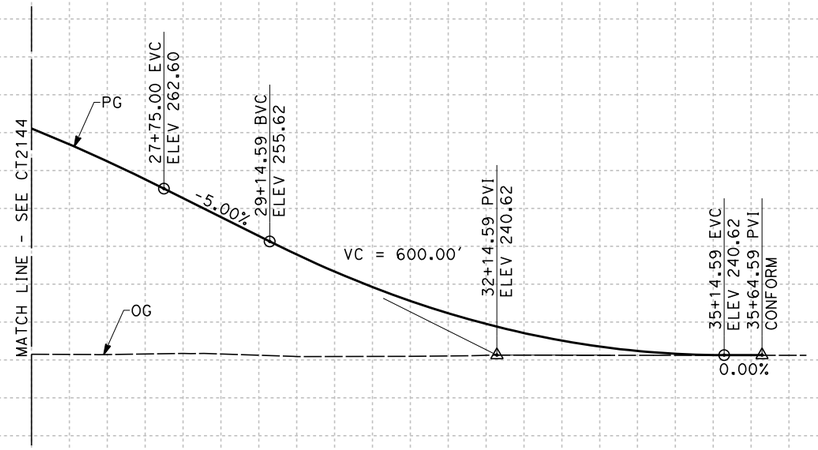
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2144
SCALE AS SHOWN
SHEET NO. 50 OF 60

RFP No.: HSR13-57
04/02/2014

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eron.sudhausen

04/02/2014 - RFP No.: HSR13-57



PROFILE
"KHA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY	Exc												
	Emb												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

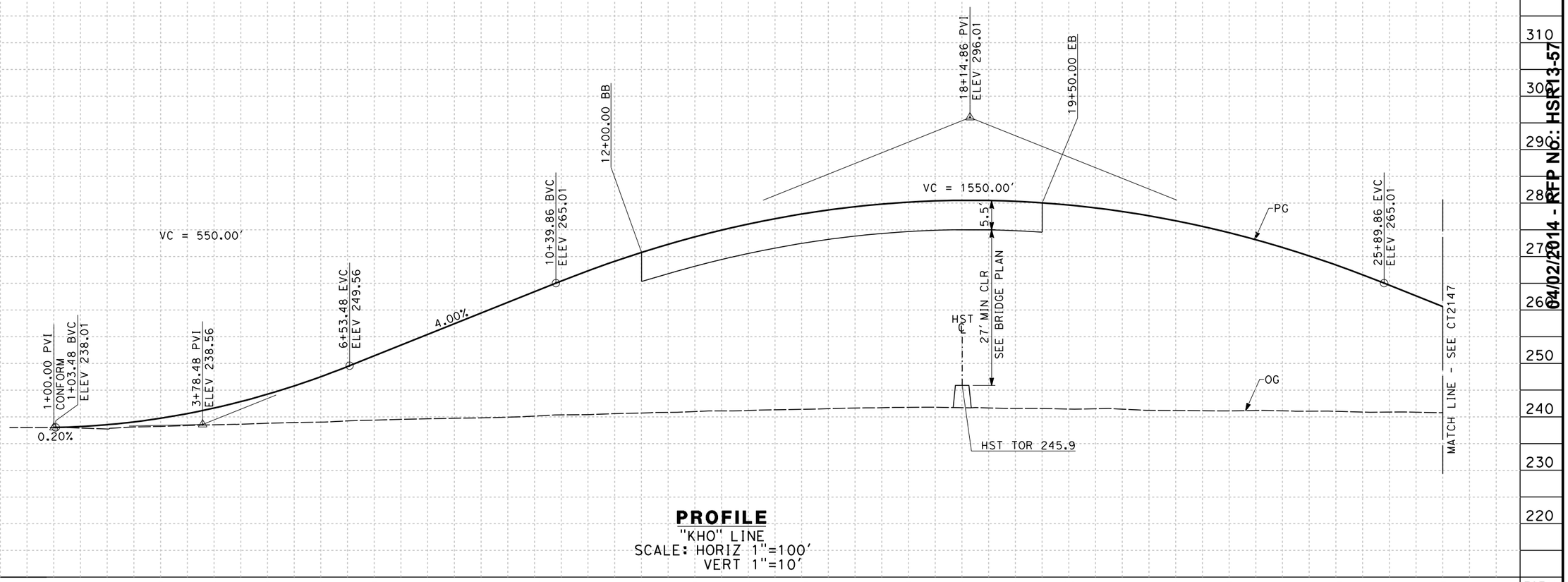
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2145
SCALE AS SHOWN
SHEET NO. 51 OF 60

NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL



PROFILE
"KHO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	TOTAL
CY Exc																													
CY Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

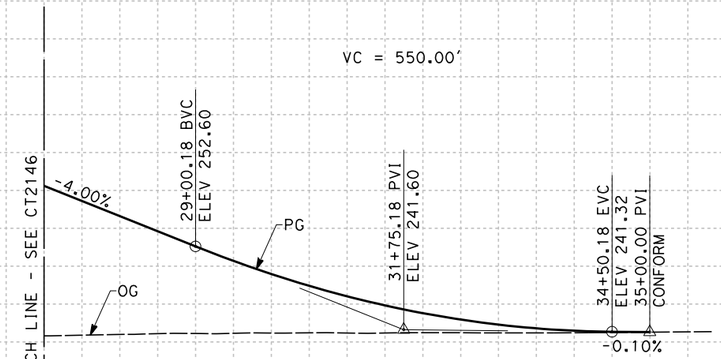
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2146
SCALE AS SHOWN
SHEET NO. 52 OF 60

04/02/2014 - RFP No.: HSR13-57

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PROFILE
"KHO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		7	8	9	30	1	2	3	4	35	TOTAL
CY	Exc										
	Emb										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
HOUSTON AVE

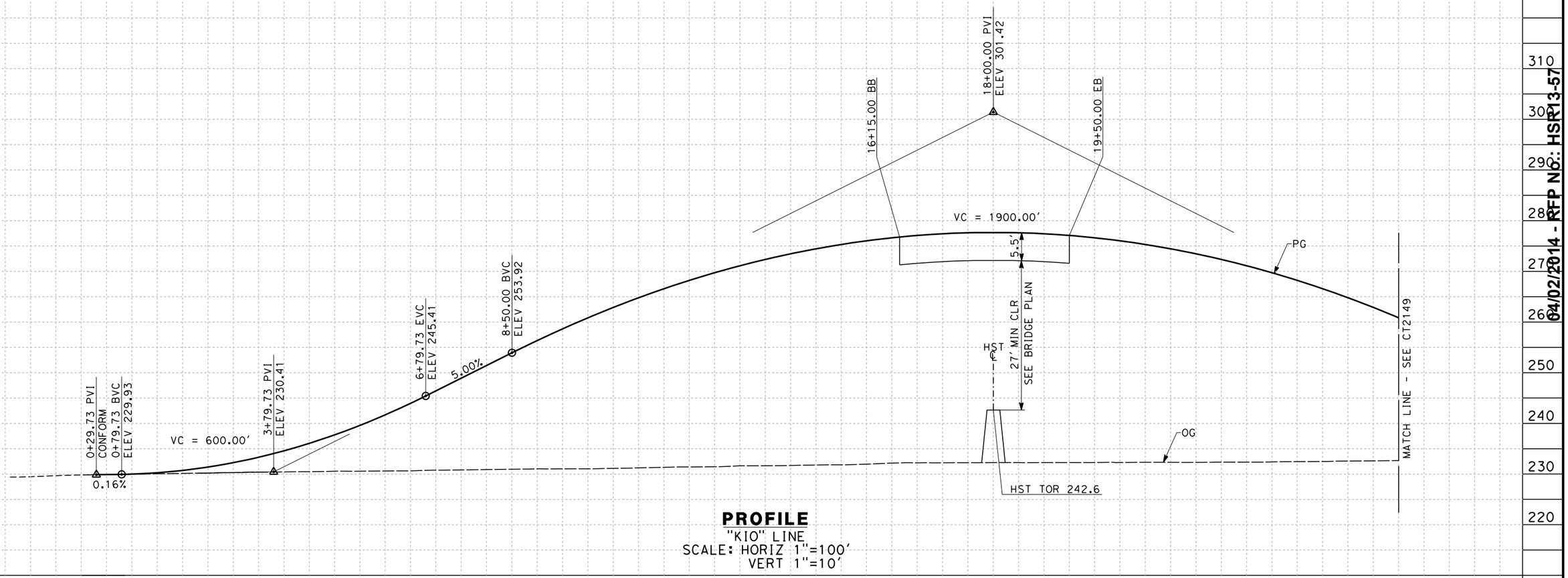
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2147
SCALE AS SHOWN
SHEET NO. 53 OF 60

RFP No.: HSR13-57
04/02/2014 - RFP No.

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NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE

"KIO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
CY Exc																												
CY Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

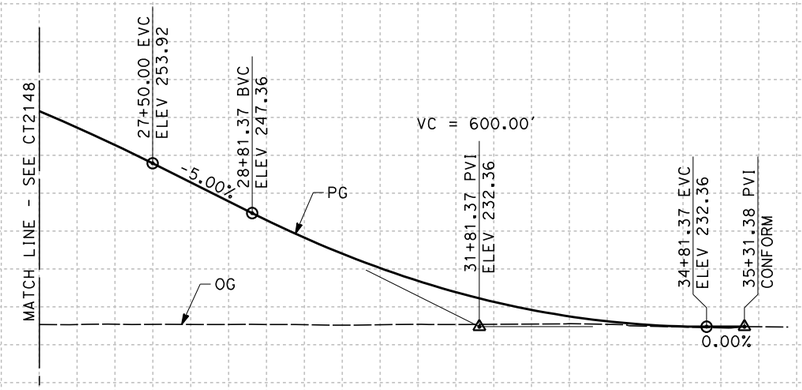
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2148
SCALE AS SHOWN
SHEET NO. 54 OF 60

04/02/2014 - RFP NO.: HSR13-57

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04/02/2014 - RFP No.: HSR13-57



PROFILE

"KIO" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	6	7	8	9	30	1	2	3	4	35	6	TOTAL
CY Exc												
CY Emb												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2149
SCALE AS SHOWN
SHEET NO. 55 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°24'15"E	242.87'
2	S36°09'25"E	1070.24'
3	S00°22'40"W	240.40'

CURVE DATA

NO.	R	Δ	T	L
(1)	1100.00'	53°14'50"	551.41'	1022.27'
(2)	1100.00'	36°32'05"	363.09'	701.41'

E CLARKSON AVE

S MINNEWAWA AVE

ROADWAY ROW

CONFORM

R=58'

R=32'

HST ROW

"H" LINE

1175+00

1180+00

1185+00

1190+00

1195+00

1200+00

1205+00

REMOVE BASE AND SURFACING

EP

32'

"FMI" 12+65.14 EC

"FMI" LINE

"FMI" 23+35.38 BC

ACCESS ROAD

"FMI" 30+36.79 EC

"FMI" 32+77.19 PI CONFORM

"FMI" 2+42.87 BC

"FMI" 0+00.00 PI CONFORM

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

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alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

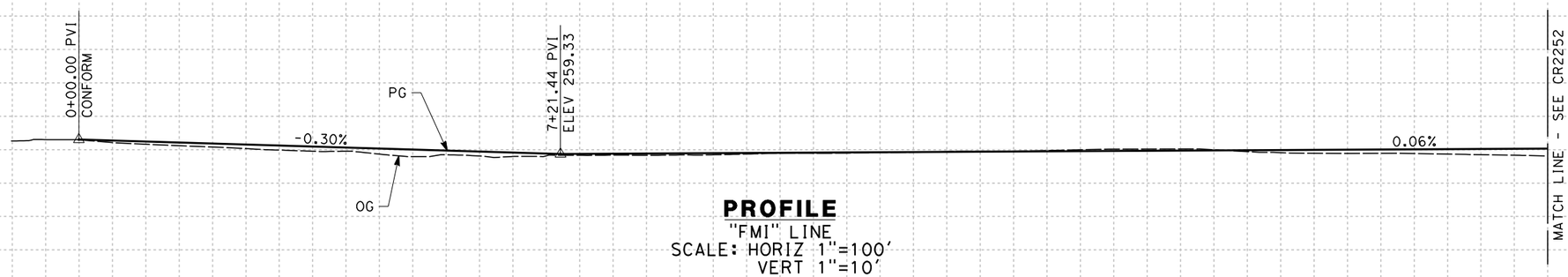
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY LAYOUT
E CLARKSON AVE & S MINNEWAWA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1251
SCALE AS SHOWN
SHEET NO. 56 OF 60

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04/02/2014 - RFP No.: HSR13-57

300
290
280
270
260
250



PROFILE
"FMI" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	TOTAL
CY Exc																								
CY Emb																								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

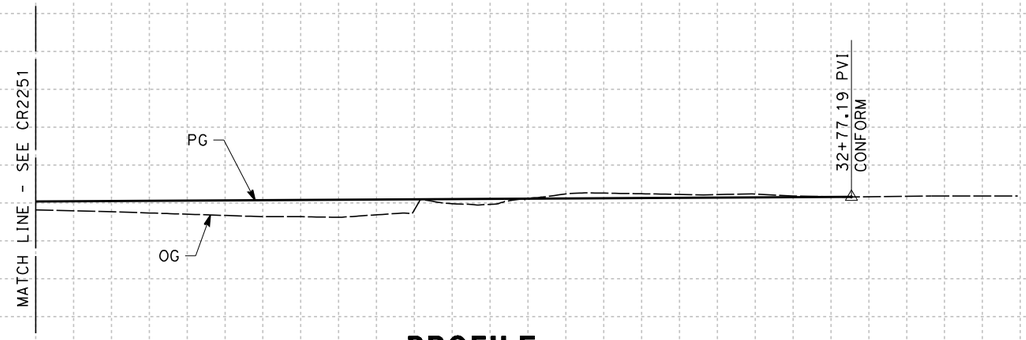
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

HANFORD SUBSECTION
ALIGNMENT H
ROADWAY PROFILE
E CLARKSON AVE & S MINNEWAWA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2251
SCALE AS SHOWN
SHEET NO. 57 OF 60



PROFILE
"FMI" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		2	3	4	25	6	7	8	9	30	1	2	3	4	35	TOTAL
CY	Exc															
	Emb															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY PROFILE
E CLARKSON AVE & S MINNEWAWA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2252
SCALE AS SHOWN
SHEET NO. 58 OF 60

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

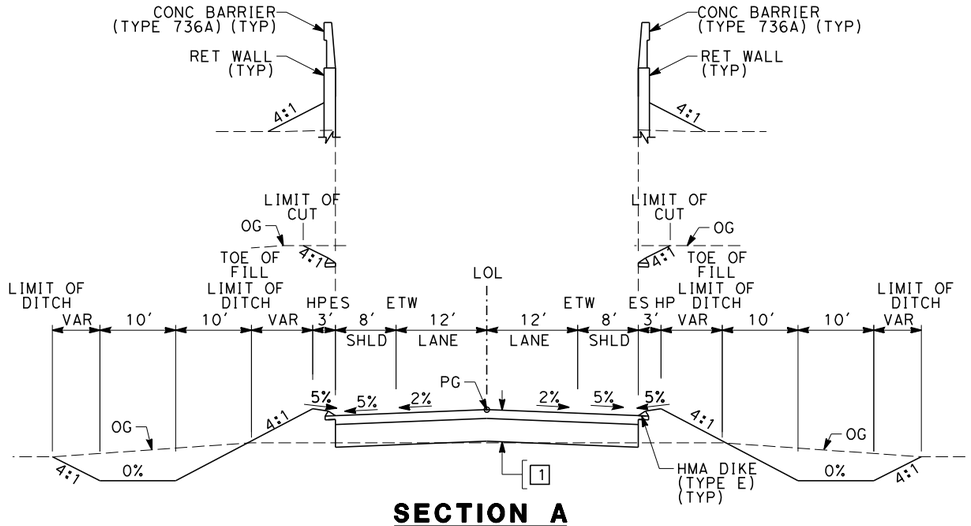
STRUCTURAL SECTIONS
TYPICAL ROADWAY

[1] 0.60' HMA (TYPE A)
1.50' CL2 AB

[2] 0.40' HMA (TYPE A)
1.20' CL2 AB

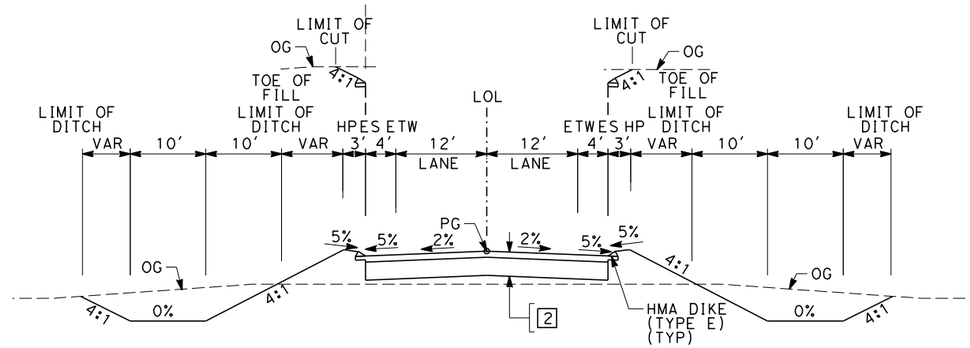
TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA/JURISDICTION
E CLARKSON AVE	FMI	55	AASHTO/FRESNO COUNTY
S CLOVIS AVE	FCL	65	AASHTO/FRESNO COUNTY
E ELKHORN AVE	FEL	65	AASHTO/FRESNO COUNTY
S FOWLER AVE	FFO	65	AASHTO/FRESNO COUNTY
E DAVIS AVE	FDA	65	AASHTO/FRESNO COUNTY
DOVER AVE	KDO	55	HDM/KINGS COUNTY
8TH AVE	K8N/K8S	55	HDM/KINGS COUNTY
EXCELSIOR AVE	KEX	55	HDM/KINGS COUNTY
ELDER AVE	KEL	55	HDM/KINGS COUNTY
FLINT AVE	KFL	60	HDM/KINGS COUNTY
FARGO AVE	KFA	55	HDM/KINGS COUNTY
7 1/2 AVE	K7N	55	HDM/KINGS COUNTY
7 1/2 AVE CONNECTOR	K7	25	HDM/KINGS COUNTY
HANFORD ARMONA RD	KHA	55	HDM/KINGS COUNTY
HOUSTON AVE	KHO	55	HDM/KINGS COUNTY
IONA AVE	KIO	55	HDM/KINGS COUNTY



SECTION A

"FEL" 4+00.00 TO 18+63.00
"FEL" 22+11.00 TO 37+00.00
"FFO" 20+60.00 TO 36+00.00
"FFO" 38+70.00 TO 54+00.00
"KEX" 15+00.00 TO 25+80.00
"KEX" 28+80.00 TO 43+00.00
"KEL" 12+00.00 TO 26+75.00
"KEL" 29+60.00 TO 44+50.00
"KFL" 8+00.00 TO 27+98.00
"KFL" 30+72.00 TO 49+00.00
"KHA" 4+50.00 TO 16+35.00
"KHA" 19+75.00 TO 27+50.00
"KHO" 3+50.00 TO 12+00.00
"KHO" 19+50.00 TO 31+00.00



SECTION B

"FCL" 11+00.00 TO 26+95.00
"FCL" 29+95.00 TO 45+00.00
"FDA" 8+00.00 TO 23+35.50
"FDA" 27+97.50 TO 42+80.00
"KDO" 12+00.00 TO 26+50.00
"KDO" 29+55.00 TO 44+00.00
"K8N" 22+00.00 TO 34+73.58
"K8S" 10+00.00 TO 23+00.00
"KFA" 11+00.00 TO 25+33.00
"KFA" 28+65.00 TO 43+00.00
"KIO" 3+00.00 TO 16+15.00
"KIO" 19+50.00 TO 33+00.00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: J. MONG
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

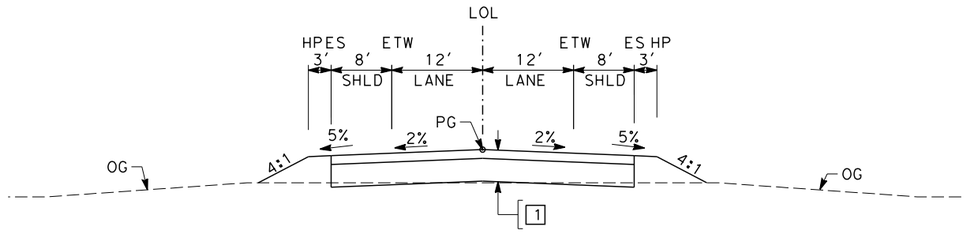
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3030
SCALE NO SCALE
SHEET NO. 59 OF 60

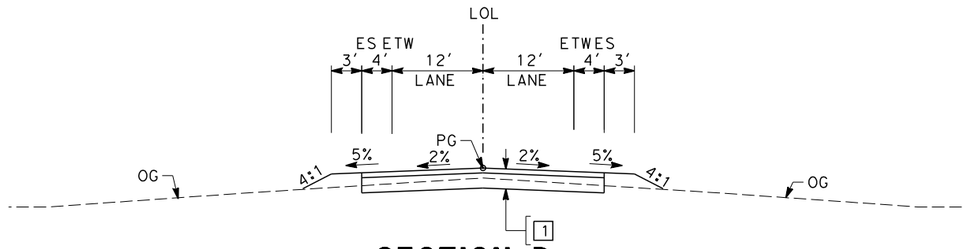
04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$



SECTION C

"FEL" 1+00.00 TO 4+00.00
"FEL" 37+00.00 TO 39+00.00
"FFO" 8+00.00 TO 20+60.00
"FFO" 54+00.00 TO 59+00.00
"KEX" 9+00.00 TO 15+00.00
"KEX" 43+00.00 TO 47+00.00
"KEL" 10+00.00 TO 12+00.00
"KEL" 44+60.00 TO 46+00.00
"KFL" 6+00.00 TO 8+00.00
"KFL" 49+00.00 TO 52+00.00
"KHA" 0+88.49 TO 4+50.00
"KHA" 27+50.00 TO 35+64.59
"KHO" 1+00.00 TO 3+50.00
"KHO" 31+00.00 TO 35+00.00



SECTION D

"K7" 0+00.00 TO 13+44.31
"K7N" 0+50.00 TO 12+05.95
"FMI" 0+00.00 TO 32+77.19
"FCL" 8+00.00 TO 11+00.00
"FCL" 45+00.00 TO 52+00.00
"FDA" 6+00.00 TO 8+00.00
"FDA" 42+80.00 TO 45+00.00
"K8N" 12+50.00 TO 22+00.00
"K8S" 23+00.00 TO 25+00.00
"KDO" 10+00.00 TO 12+00.00
"KDO" 44+00.00 TO 46+00.00
"KFA" 9+00.00 TO 11+00.00
"KFA" 43+00.00 TO 45+00.00
"KIO" 0+29.73 TO 3+00.00
"KIO" 33+00.00 TO 35.31.38

04/02/2014 - RFP No.: HSR13-57

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CLI60413

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

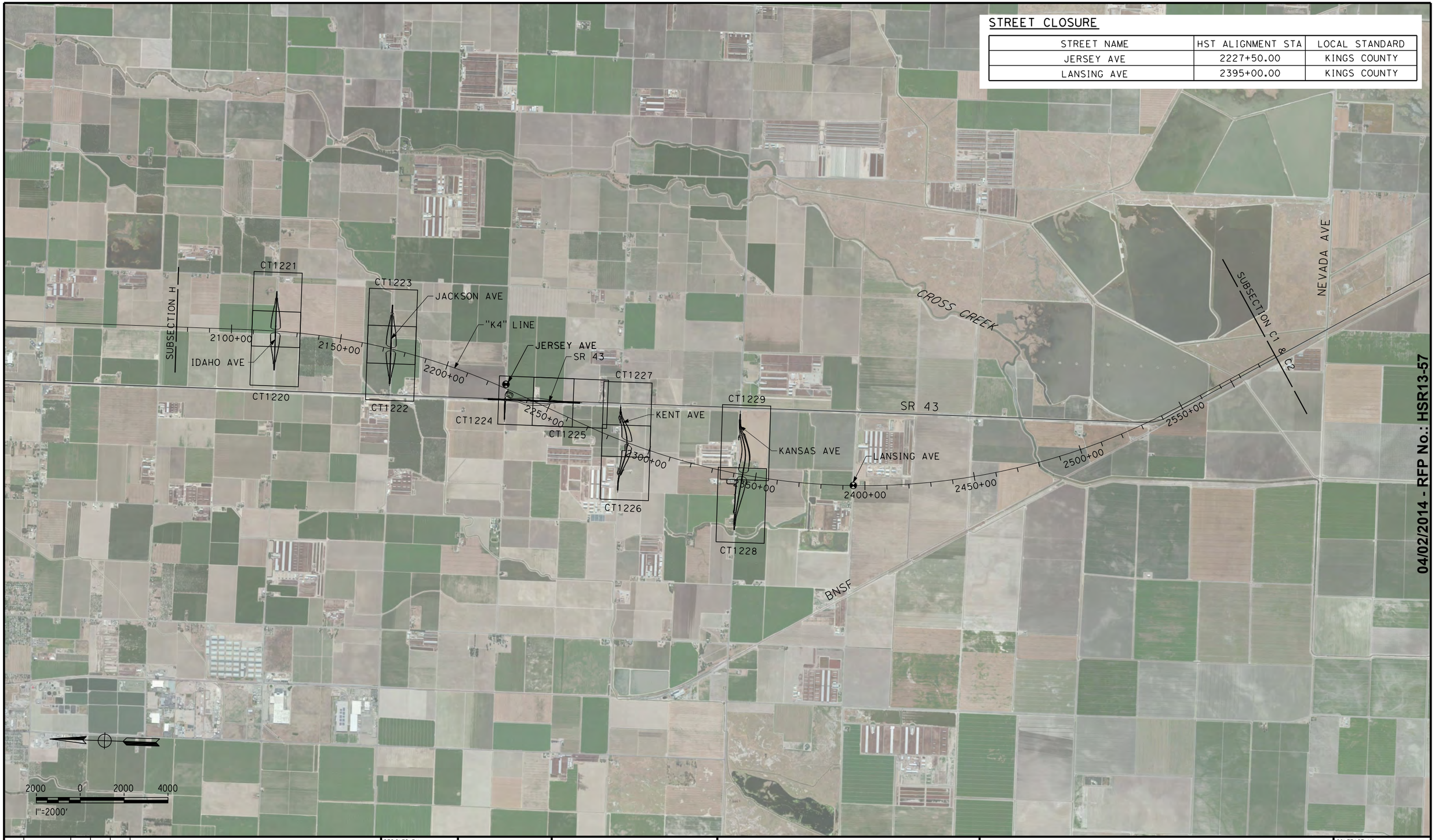
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3031
SCALE NO SCALE
SHEET NO. 60 OF 60

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
JERSEY AVE	2227+50.00	KINGS COUNTY
LANSING AVE	2395+00.00	KINGS COUNTY



04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

KAWEAH SUBSECTION
ALIGNMENT K4
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0065
SCALE AS SHOWN
SHEET NO. 1 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°43'34" E	3600.00'

IDAHO AVE

"KID" 10+00.00 PI CONFORM

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

DRAINAGE DITCH (TYP)

1

32'

"KID" LINE

BB

EP

MBGR (TYP)

ROADWAY ROW

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

CULVERT

EXIST CANAL

2125+00

2120+00

2115+00

2110+00

HST ROW

"K4" LINE

"K4" 2120+05.79 POC = "KID" 27+88.38 POT

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH TOE OF FILL

EB

SEE CT1221 - MATCH LINE

LIMIT OF DITCH TOE OF FILL

LIMIT OF DITCH

ROADWAY ROW

CANAL REALIGNMENT

100 0 100 200

SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

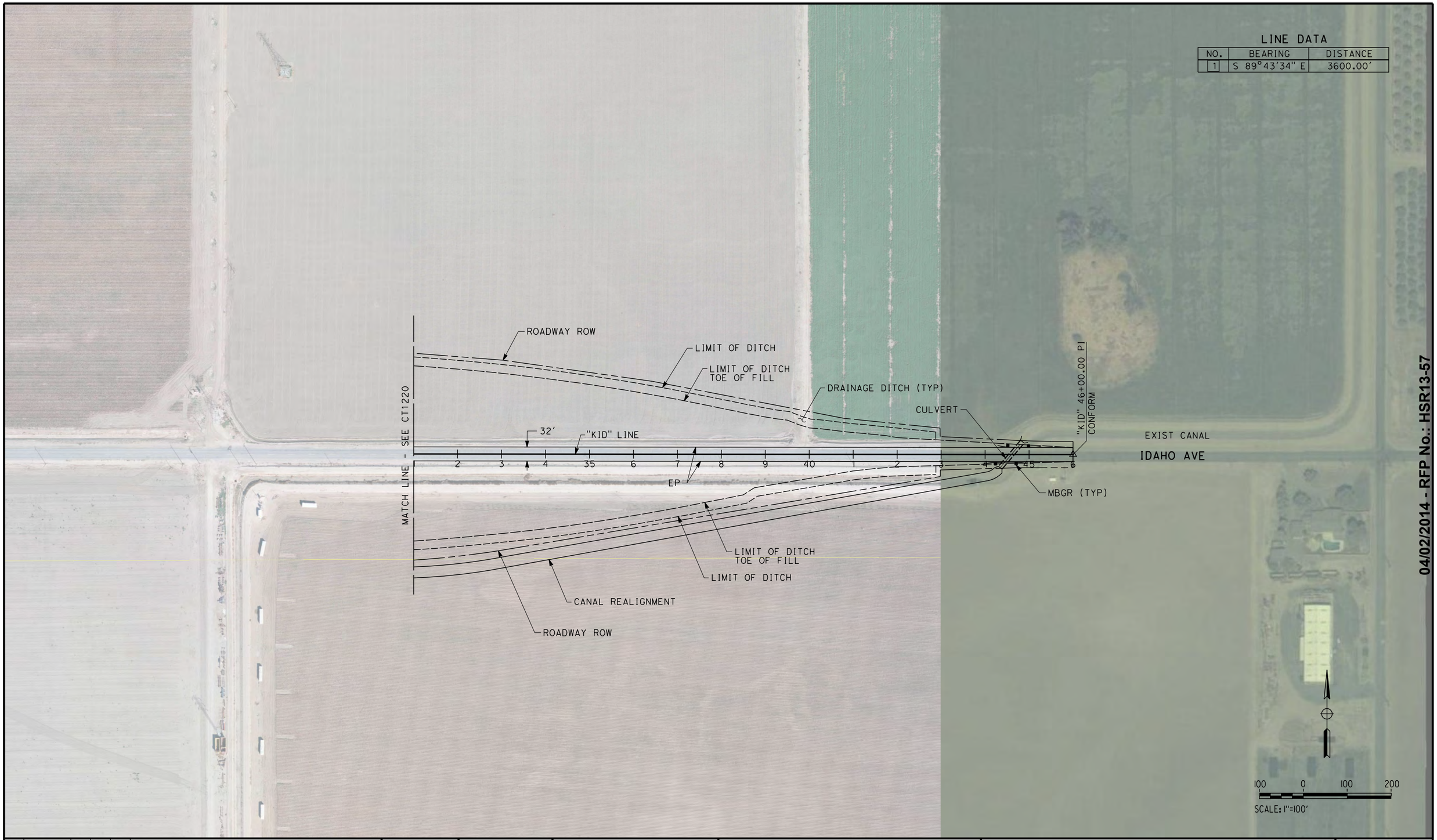
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1220
SCALE AS SHOWN
SHEET NO. 2 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°43'34" E	3600.00'



04/02/2014 - RFP No.: HSR13-57

$USER$ $TIME$ $FILE$ $DATE$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1221
SCALE AS SHOWN
SHEET NO. 3 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°41'46" E	3700.00'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1222
SCALE AS SHOWN
SHEET NO. 4 OF 23

$USER$ $DATE$ $TIME$ $FILE$



LINE DATA

NO.	BEARING	DISTANCE
1	S 89°41'46" E	3700.00'

04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1223
SCALE AS SHOWN
SHEET NO. 5 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 00°27'06" W	4500.00'
2	N 89°42'41" W	1000.00'

2220+00
2225+00
2230+00
2235+00
2240+00
2245+00
2250+00
CONFORM
R=50'
ROADWAY ROW
"K4" LINE
CANAL REALIGNMENT
HST ROW
CULVERT
PIPE REALIGNMENT
RETENTION BASIN
"SR43J" 0+00.00 PI
"SR43J" 2+00.00 CONFORM
"SR43J" LINE
R=60'
TOP OF CUT
"K4" 2242+13.82 POC= "SR43J" 22+35.60 POT
BB
EP
SR 43
MBGR (TYP)
1
89'
44'
EB
MATCH LINE - SEE CT1225
"SR43J" 09+87.73 POT= "KJE" 10+00.00 POT
TOE OF CUT
ROADWAY ROW
2
JERSEY AVE
"KJE" 1+00.00 CONFORM
"KJE" 0+00.00 PI

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

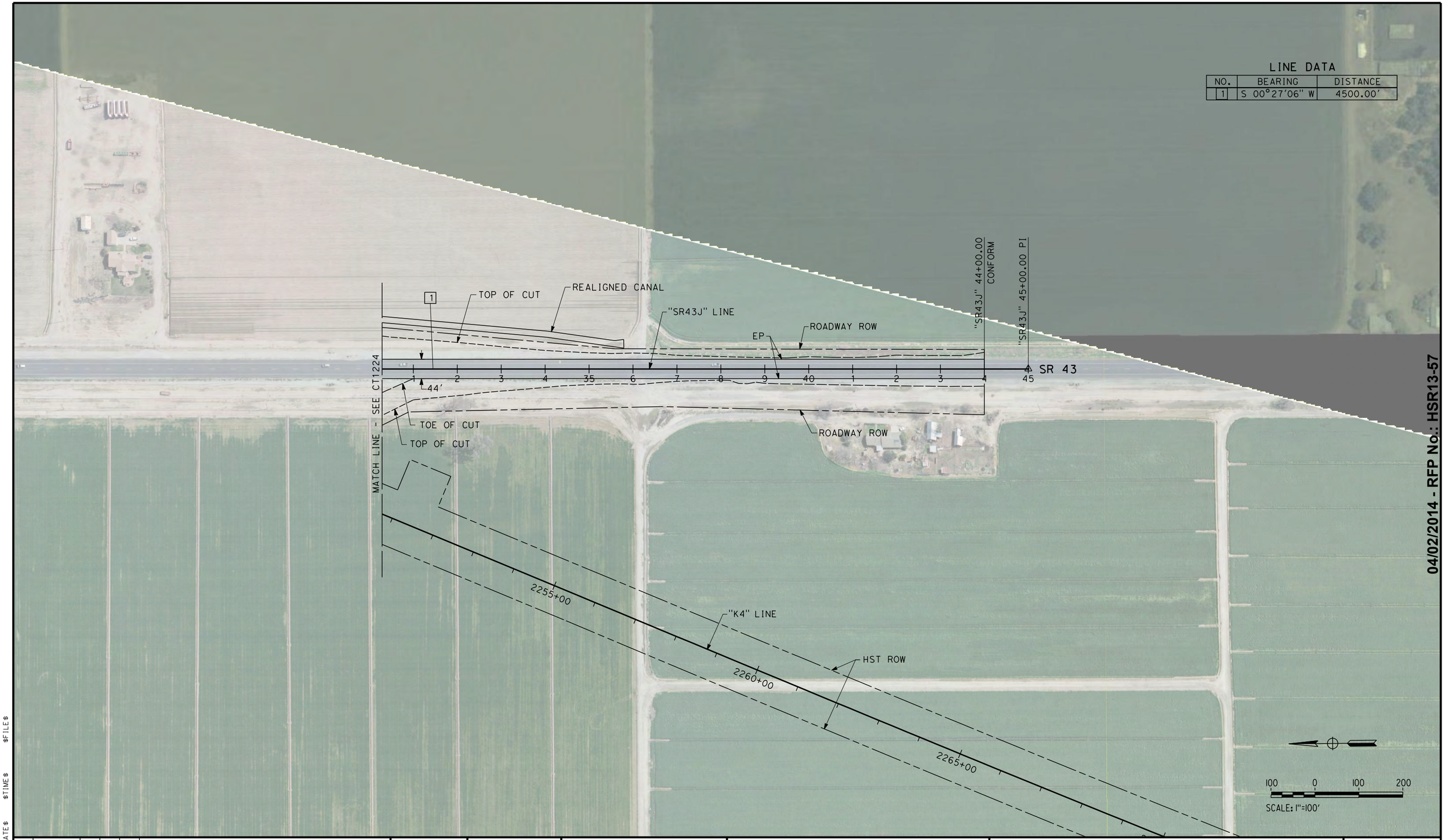
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (JERSEY AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1224
SCALE AS SHOWN
SHEET NO. 6 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 00°27'06" W	4500.00'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
STATE ROUTE 43 (JERSEY AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1225
SCALE AS SHOWN
SHEET NO. 7 OF 23

$USER$ $DATE$ $TIME$ $FILE$

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°46'22" E	358.19'
2	S 73°26'35" E	583.18'

CURVE DATA

NO.	R	Δ	T	L
①	2000.00'	16°19'46"	286.95'	570.01'
②	2500.00'	40°19'05"	917.79'	1759.21'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	194.62' LT 29+29.03	79.71' LT 32+54.73	433'	30'

KENT AVE
"KKE" 10+00.00 PI
"KKE" 11+00.00 CONFORM
"KKE" 13+58.19 BC
ACCESS ROAD
CONFORM
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
ROADWAY ROW
R=35'
R=60'
R=90'
R=510'
R=25'
32'
TCE
"KKE" 19+28.20 EC
DRAINAGE DITCH (TYP)
"KKE" LINE
RETAINING WALL NO.1
"K4" 2289+20.77 POC= "KKE" 33+32.84 POC
ACCESS ROAD
RADIO SITE (WEST OPTION)
EP
BB
"KKE" 25+11.38 BC
ROADWAY ROW
2280+00
2285+00
2290+00
2295+00
"K4" LINE
HST ROW
RADIO SITE (EAST OPTION)
ACCESS ROAD
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
MATCH LINE - SEE CT1227
EB
MBGR (TYP)
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1226
SCALE AS SHOWN
SHEET NO. 8 OF 23

$FILE$ $TIME$ $DATE$ $USER$

LINE DATA

NO.	BEARING	DISTANCE
3	S 89°46'22" E	201.39'

CURVE DATA

NO.	R	Δ	T	L
②	2500.00'	40°19'05"	917.79'	1759.21'
③	1500.00'	23°59'19"	318.68'	628.02'



04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
KENT AVE

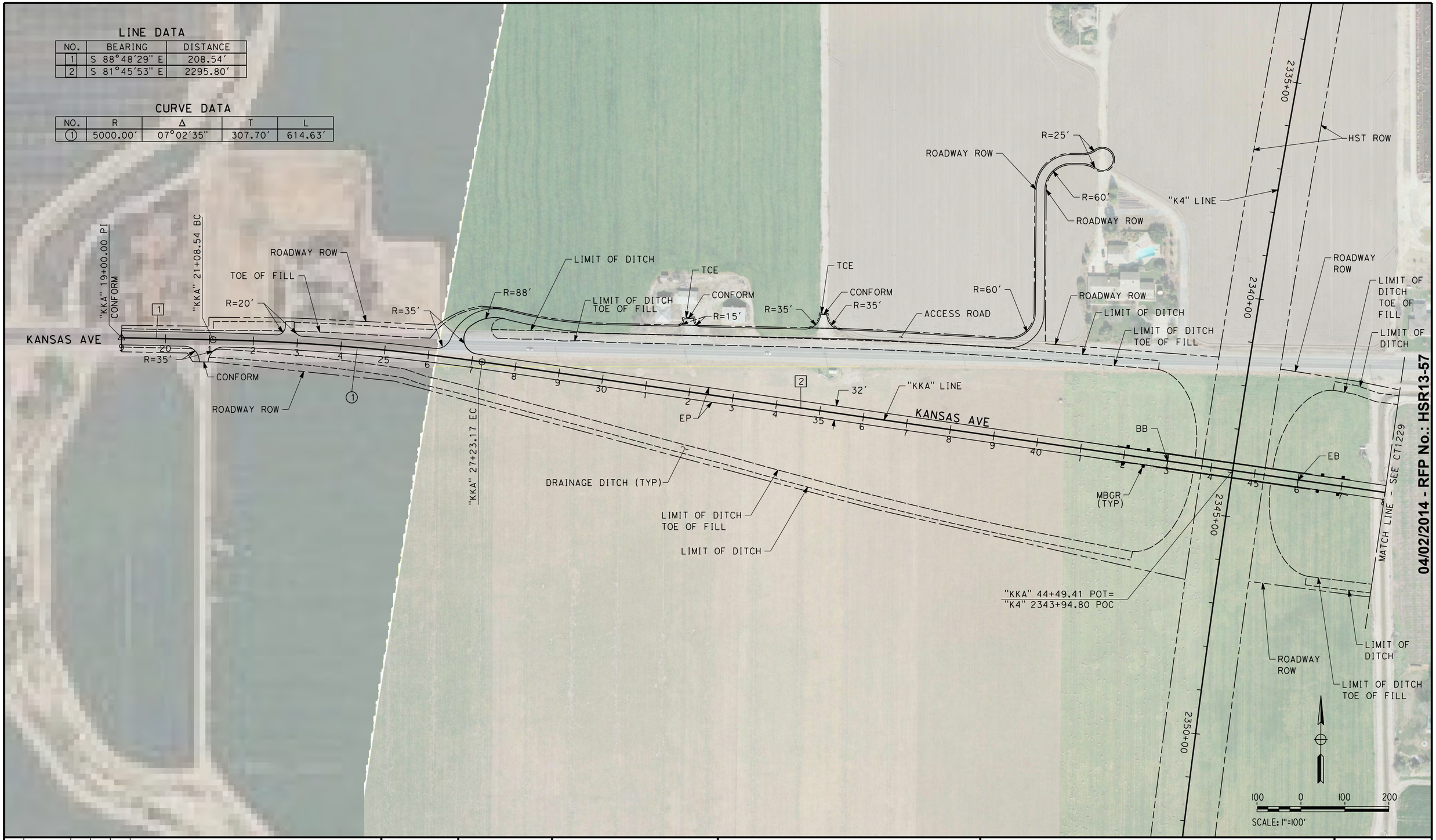
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1227
SCALE AS SHOWN
SHEET NO. 9 OF 23

LINE DATA

NO.	BEARING	DISTANCE
1	S 88°48'29" E	208.54'
2	S 81°45'53" E	2295.80'

CURVE DATA

NO.	R	Δ	T	L
(1)	5000.00'	07°02'35"	307.70'	614.63'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1228
SCALE AS SHOWN
SHEET NO. 10 OF 23

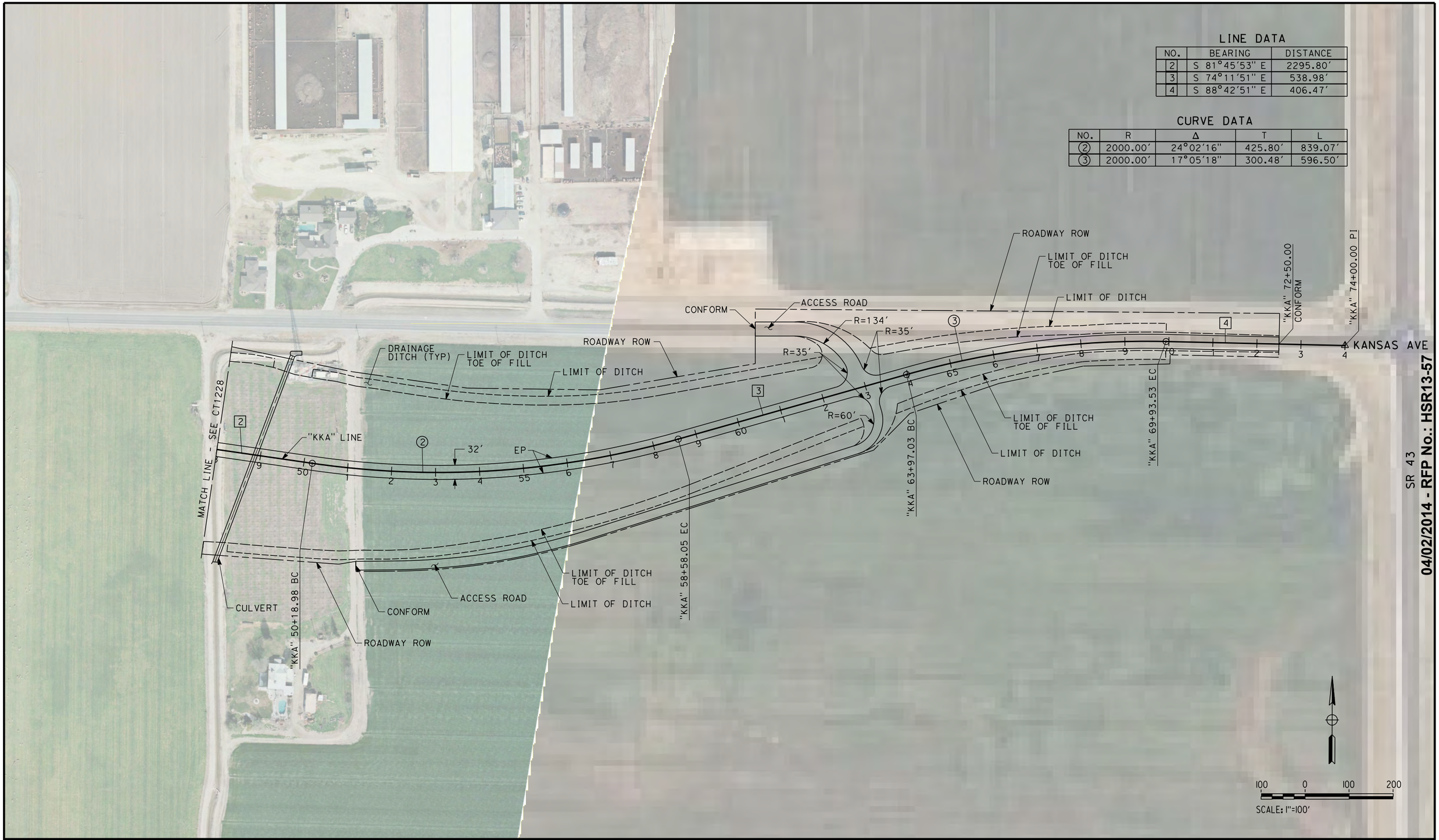
$USER$ $DATE$ $TIME$ $FILE$

LINE DATA

NO.	BEARING	DISTANCE
2	S 81°45'53" E	2295.80'
3	S 74°11'51" E	538.98'
4	S 88°42'51" E	406.47'

CURVE DATA

NO.	R	Δ	T	L
(2)	2000.00'	24°02'16"	425.80'	839.07'
(3)	2000.00'	17°05'18"	300.48'	596.50'



SR 43
04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

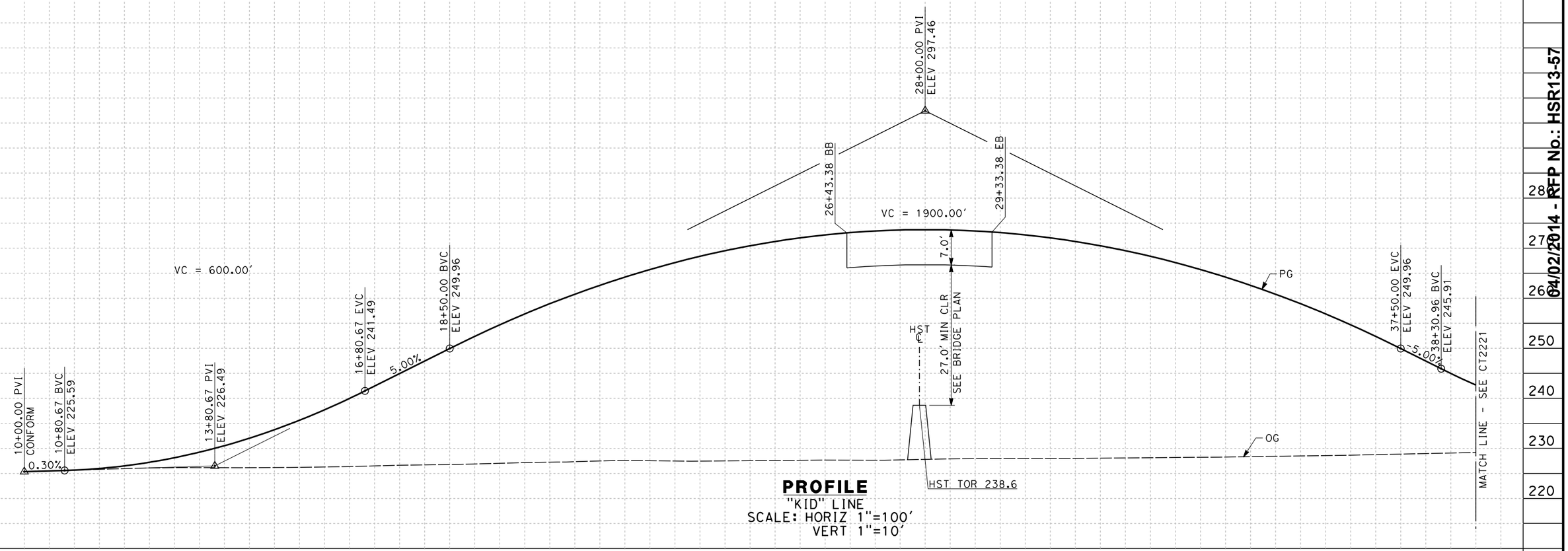
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION LAYOUT
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1229
SCALE AS SHOWN
SHEET NO. 11 OF 23

$USER$ $DATE$ $TIME$ $FILE$

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KID" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

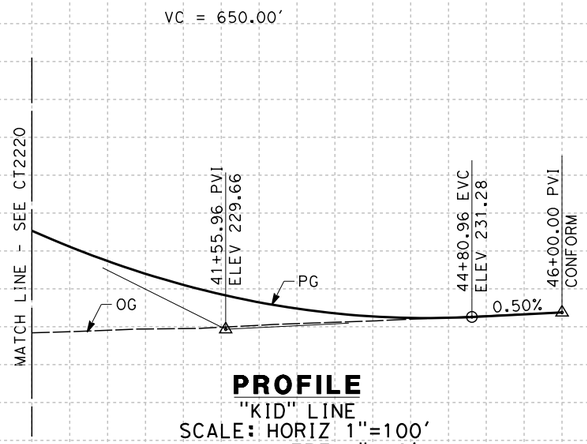
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2220
SCALE AS SHOWN
SHEET NO. 12 OF 23

04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$



PROFILE
"KID" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		9	40	1	2	3	4	45	6	TOTAL
CY	Exc									
	Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

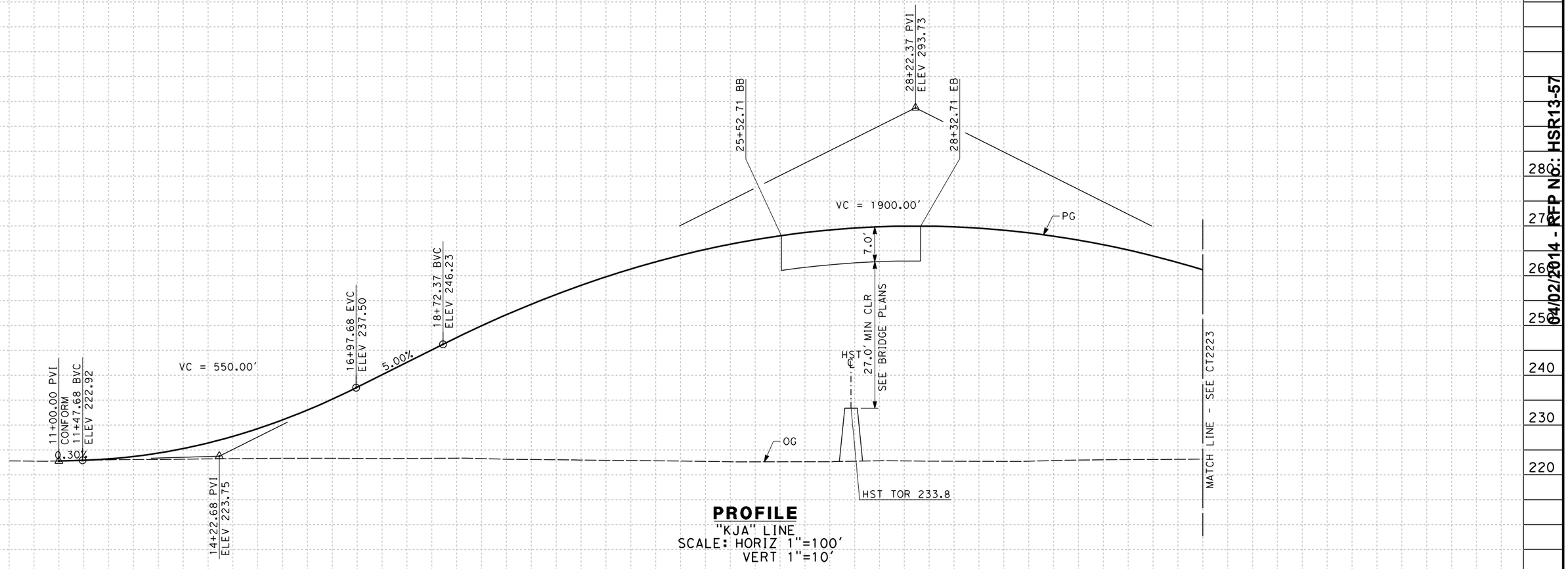
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
IDAHO AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2221
SCALE AS SHOWN
SHEET NO. 13 OF 23

$FILE$ $TIME$ $DATE$ $USER$

04/02/2014 - RFP No.: HSR13-57

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KJA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

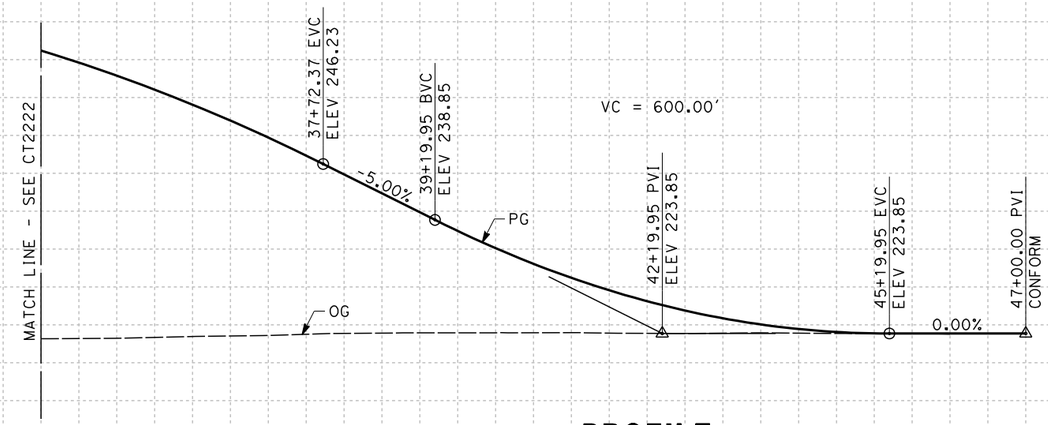
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2222
SCALE AS SHOWN
SHEET NO. 14 OF 23

$FILE$ $TIME$ $DATE$ $USER$

RFP No.: HSR13-57 - 04/02/2014

04/02/2014 - RFP No.: HSR13-57



PROFILE
"KJA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	7	TOTAL
CY Exc															
CY Emb															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

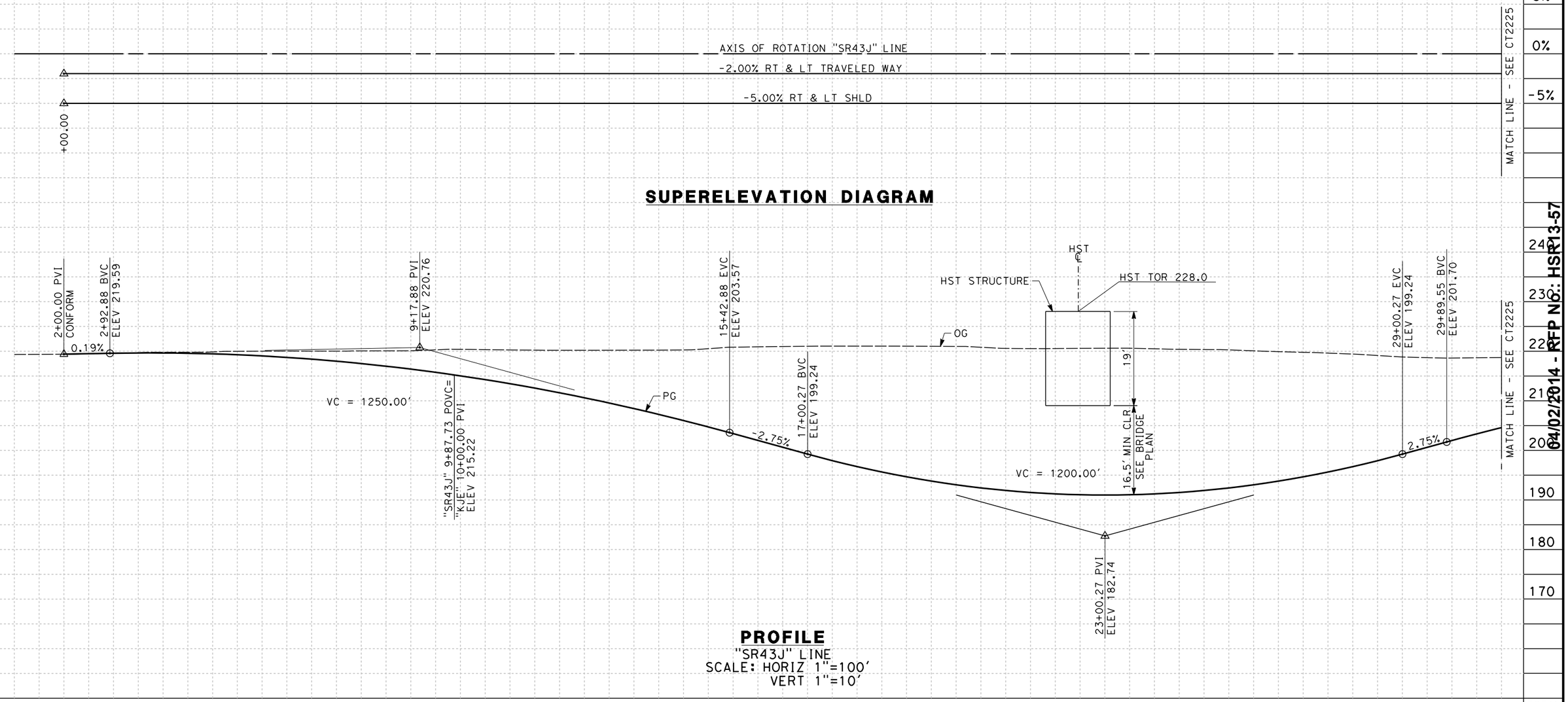
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
JACKSON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2223
SCALE AS SHOWN
SHEET NO. 15 OF 23

$FILE$ $TIME$ $DATE$ $USER$

NOTES:
1. MINIMUM VERTICAL CLEARANCE BELOW HST STRUCTURE IS 16.5' FROM ROADWAY



SUPERELEVATION DIAGRAM

PROFILE
"SR43J" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	TOTAL
CY Exc																																
CY Emb																																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

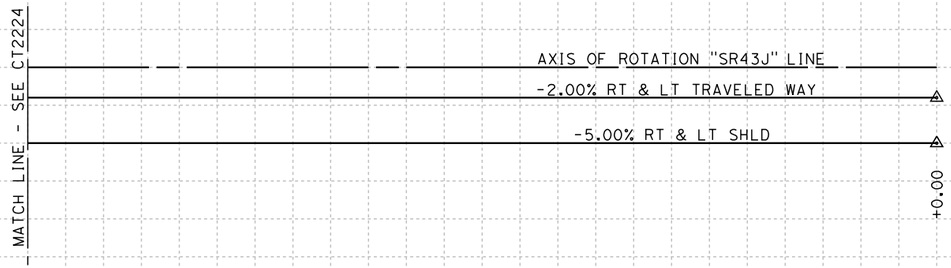
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (JERSEY AVE)

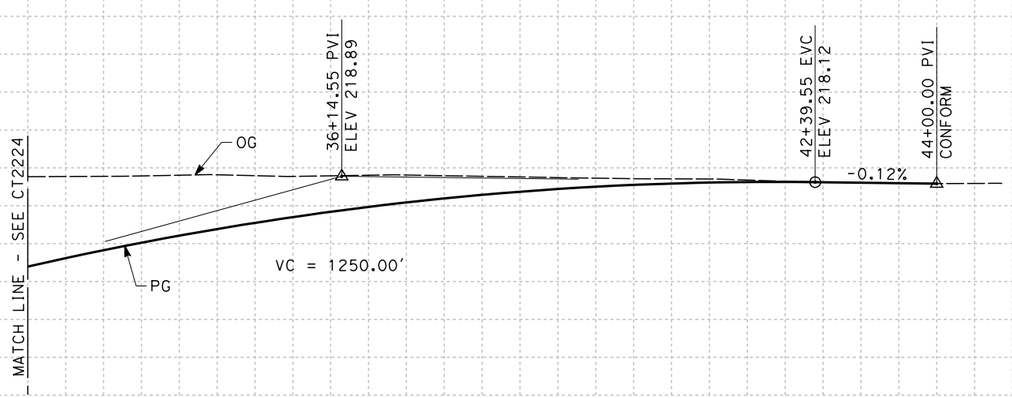
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2224
SCALE AS SHOWN
SHEET NO. 16 OF 23

RFP No: HSR13-57
04/02/2014

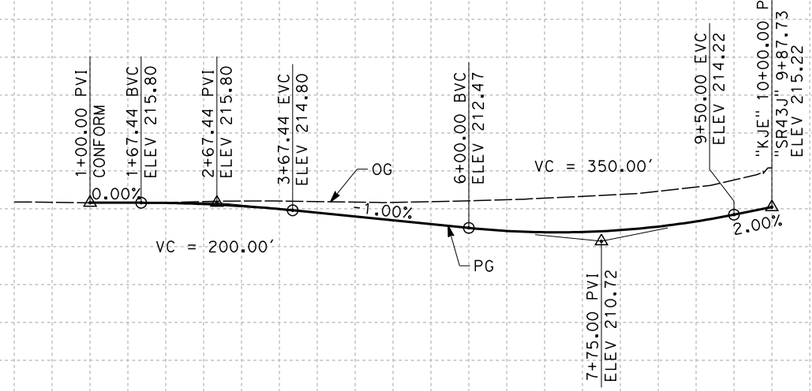
$FILE$ $TIME$ $DATE$ $USER$



SUPERELEVATION DIAGRAM



PROFILE
"SR43J" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'



PROFILE
"KJE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	2	3	4	35	6	7	8	9	40	1	2	3	4	45	1	2	3	4	5	6	7	8	9	10	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

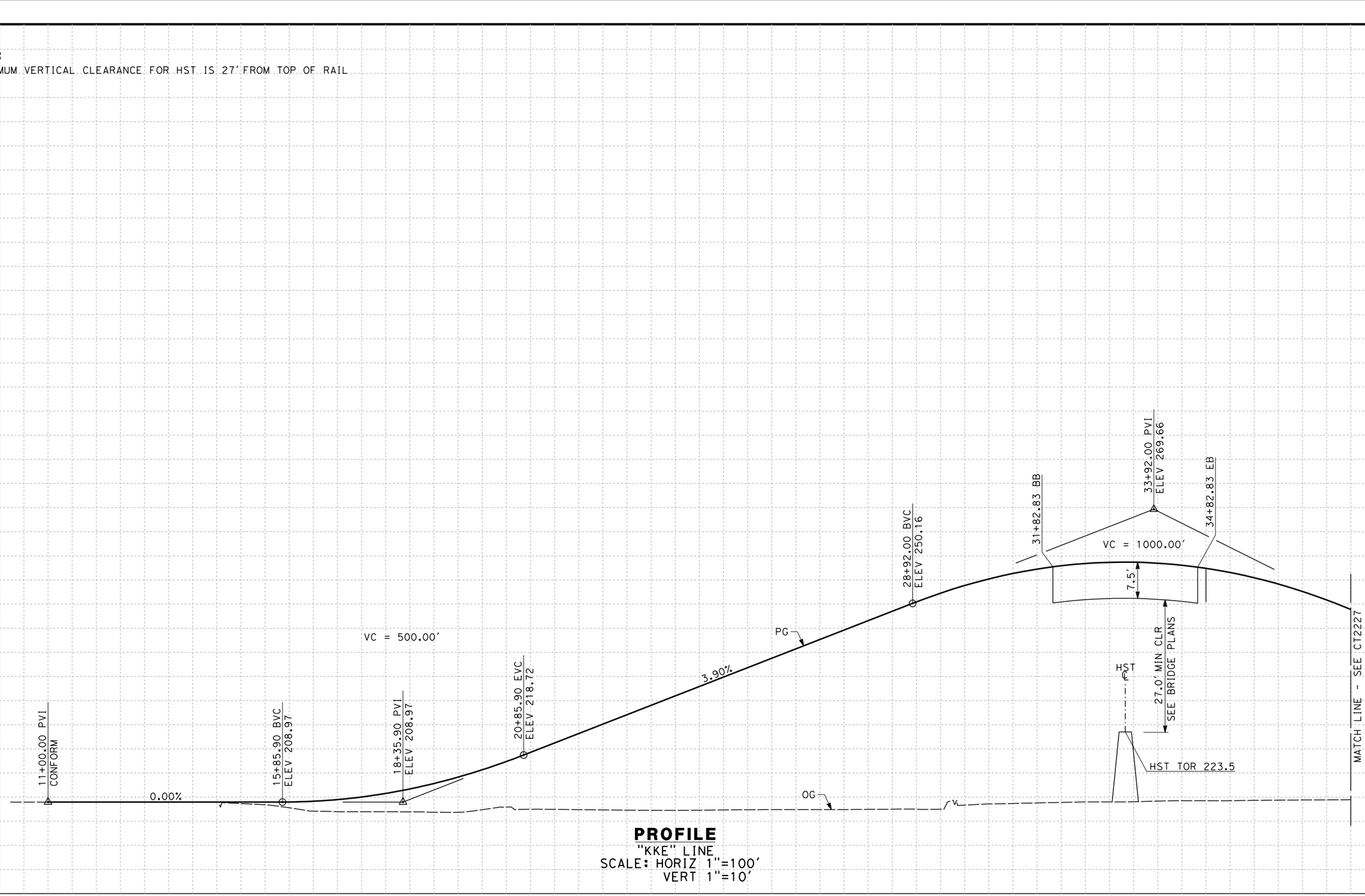
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
STATE ROUTE 43 (JERSEY AVE)

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2225
SCALE AS SHOWN
SHEET NO. 17 OF 23

$FILE$ $TIME$ $DATE$ $USER$

HSR13-57 RFP No. 2: 04/02/2014

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KKE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	TOTAL
CY	Exc																														
	Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

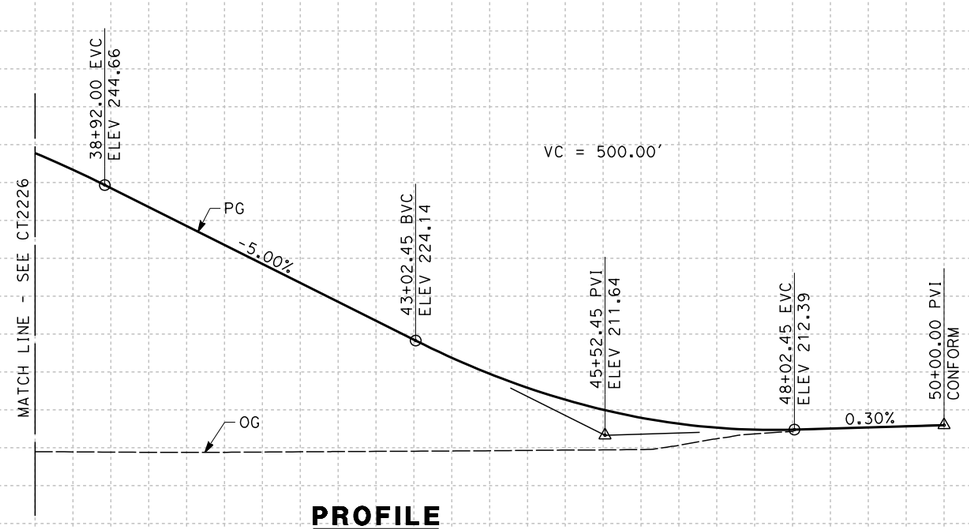
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2226
SCALE AS SHOWN
SHEET NO. 18 OF 23

$FILE$ $TIME$ $DATE$ $USER$

04/02/2014 - RFP No: HSR13-57



PROFILE
"KKE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	40	1	2	3	4	45	6	7	8	9	50	TOTAL
CY Exc														
CY Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

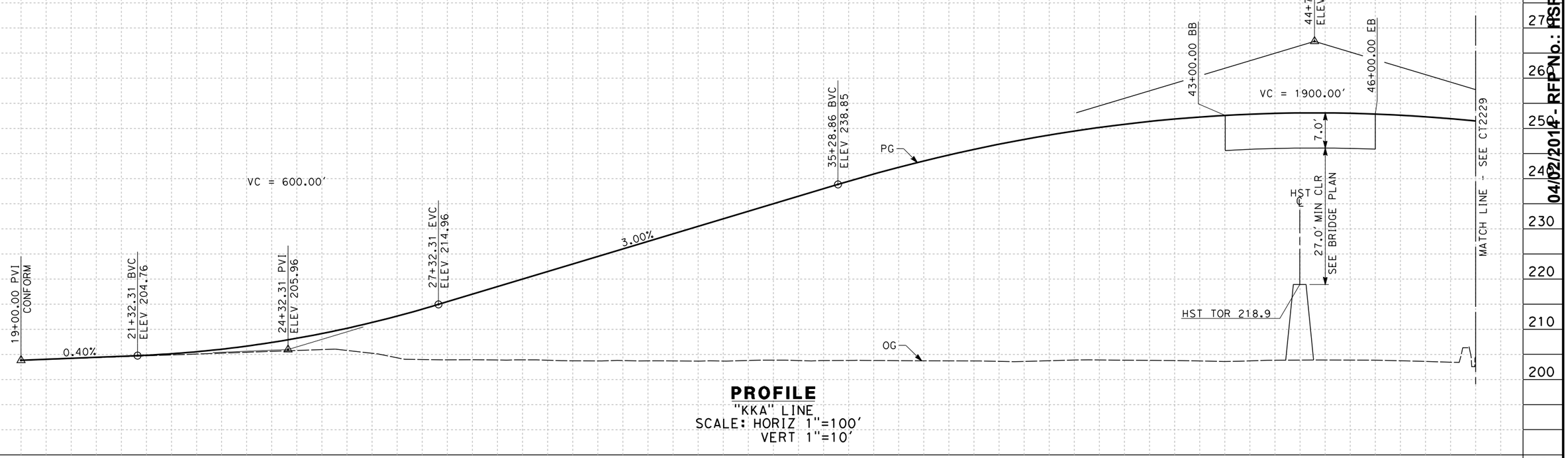
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2227
SCALE AS SHOWN
SHEET NO. 19 OF 23

RFP No: HSR13-57
04/02/2014 - RFP No

$FILE$ $TIME$ $DATE$ $USER$

NOTES:
1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
"KKA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

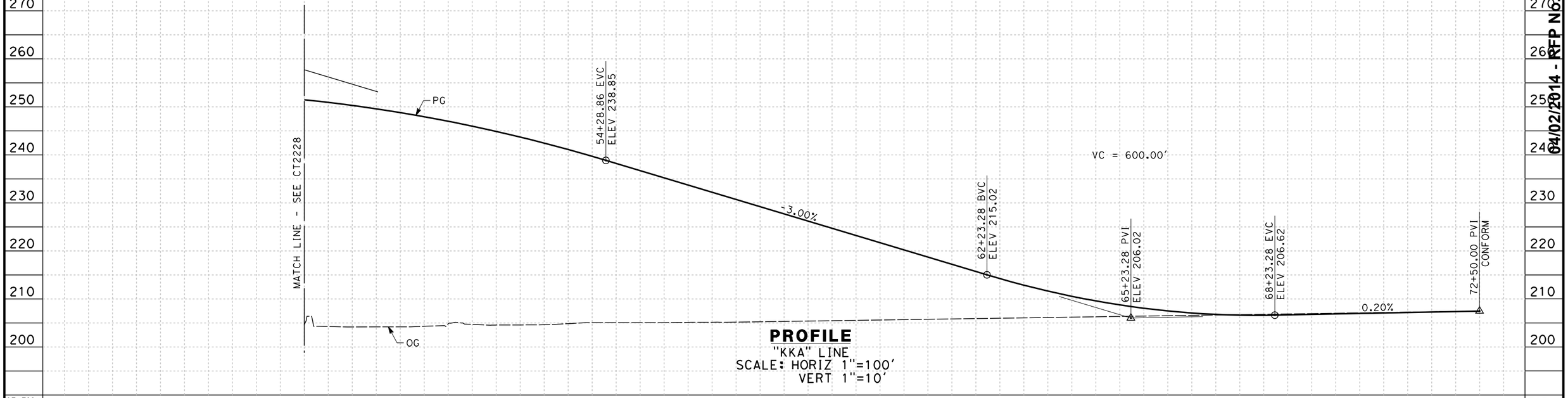
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2228
SCALE AS SHOWN
SHEET NO. 20 OF 23

$FILE$ $TIME$ $DATE$ $USER$

04/02/2014 - RFP No.: HSR13-57



PROFILE
"KKA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	3	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. CANNON
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
GRADE SEPARATION PROFILE
KANSAS AVE

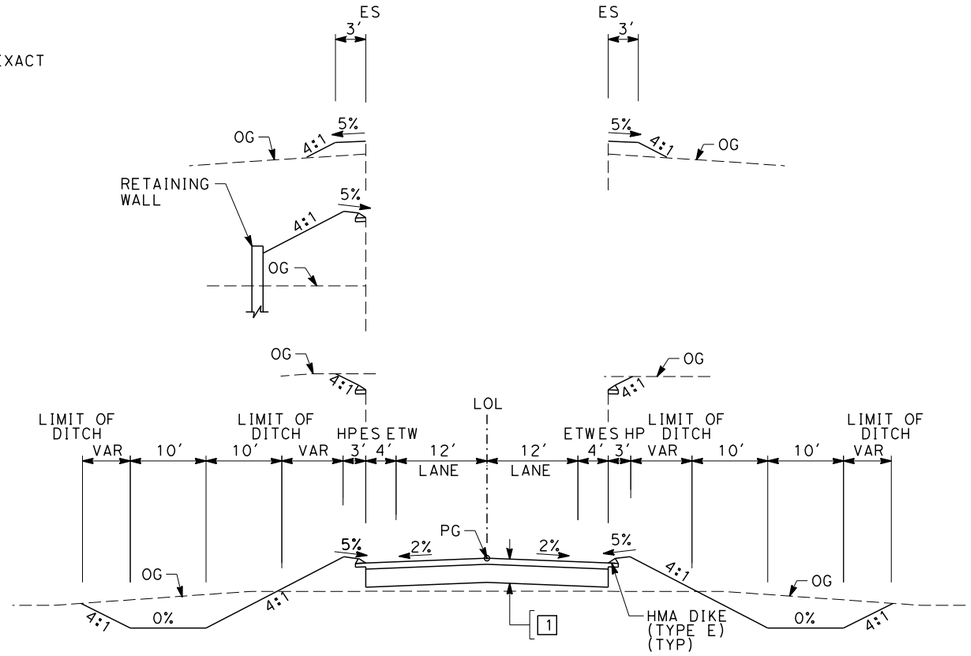
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2229
SCALE AS SHOWN
SHEET NO. 21 OF 23

$FILE$ $TIME$ $DATE$ $USER$

RFP No.: HSR13-57 - 04/02/2014

NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

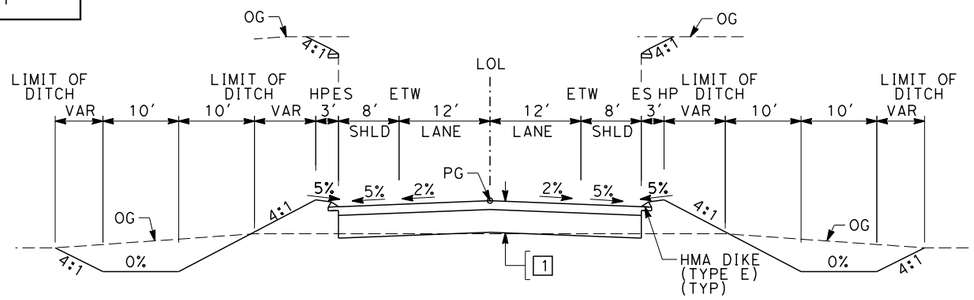


SECTION A

"KID" 10+00.00 TO 26+43.38
"KID" 29+33.38 TO 46+00.00
"KJE" 1+00.00 TO 10+00.00
"KKE" 11+00.00 TO 31+82.83
"KKE" 34+82.83 TO 50+00.00
"KKA" 19+00.00 TO 43+00.00
"KKA" 46+00.00 TO 72+50.00

TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA/JURISDICTION
IDAHO AVE	KID	55	HDM/KINGS COUNTY
JACKSON AVE	KJA	55	HDM/KINGS COUNTY
SR 43 (JERSEY AVE)	SR43J	70	HDM/CALTRANS
KENT AVE	KKE	45	HDM/KINGS COUNTY
KANSAS AVE	KKA	60	HDM/KINGS COUNTY



SECTION B

"KJA" 11+00.00 TO 25+52.71
"KJA" 28+32.71 TO 47+00.00

STRUCTURAL SECTIONS
TYPICAL ROADWAY

1 — 0.50' HMA (TYPE A)
1.00' CL2 AB

04/02/2014 - RFP No.: HSR13-57

$USER$ $DATE$ $TIME$ $FILE$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

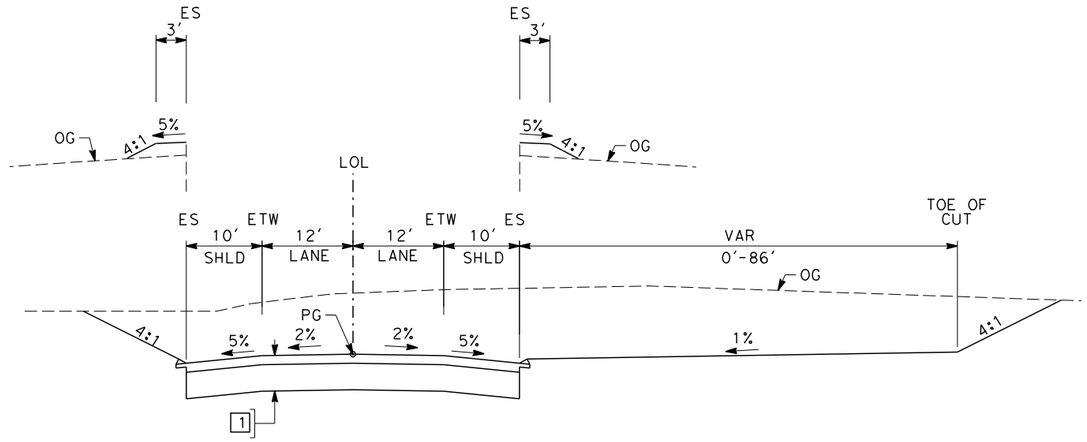
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3230
SCALE NO SCALE
SHEET NO. 22 OF 23



SECTION C

"SR43J" 2+00.00 TO 44+00.00

04/02/2014 - RFP No.: HSR13-57

$USER$ $DATE$ $TIME$ $FILE$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. CANNON
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

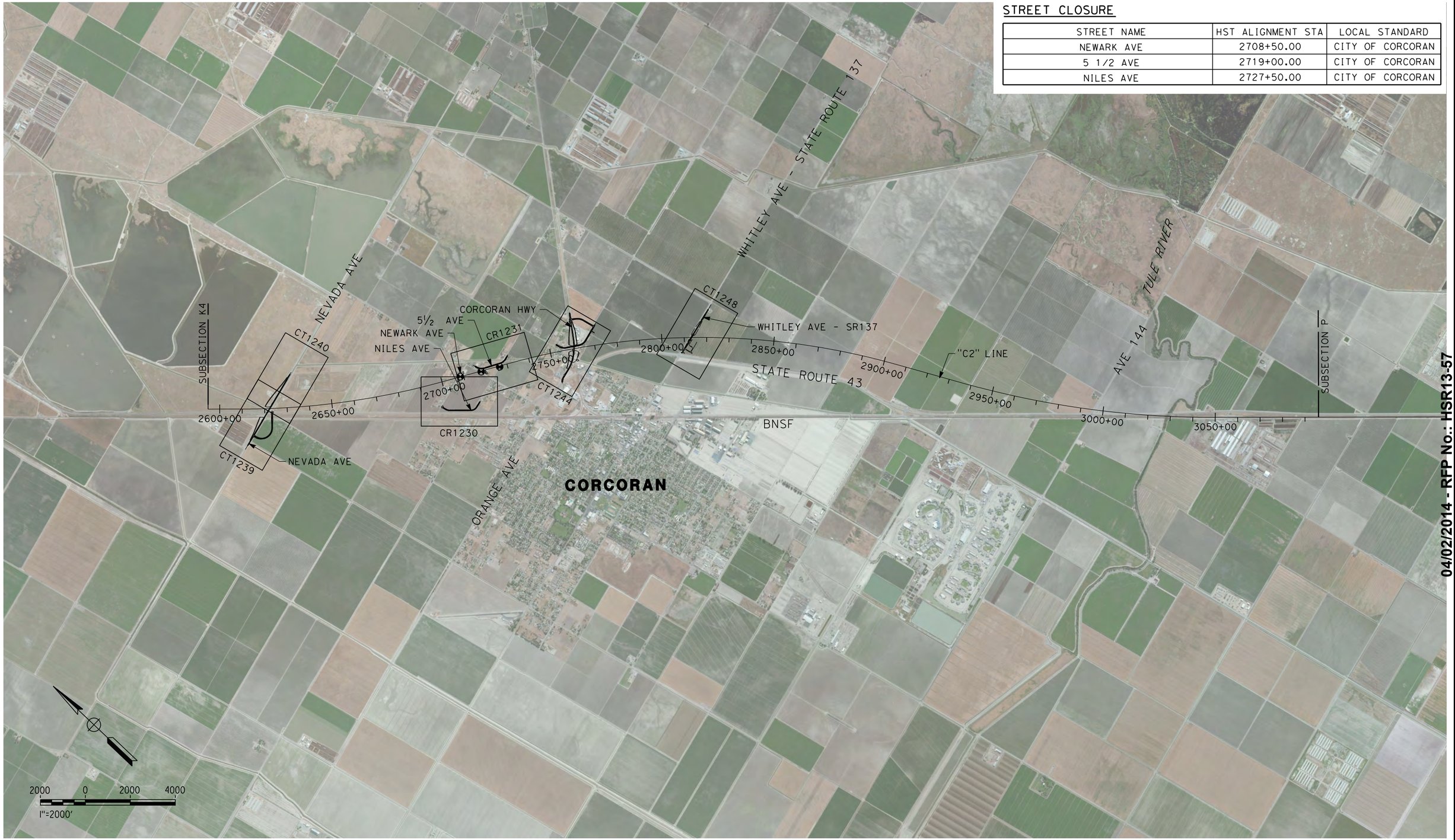
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3231
SCALE NO SCALE
SHEET NO. 23 OF 23

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
NEWARK AVE	2708+50.00	CITY OF CORCORAN
5 1/2 AVE	2719+00.00	CITY OF CORCORAN
NILES AVE	2727+50.00	CITY OF CORCORAN



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0075
SCALE AS SHOWN
SHEET NO. 1 OF 18

04/02/2014 - RFP No.: HSR13-57

$USER$ $DATE$ $TIME$ $FILE$

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	16.00' RT 07+92.46	16.00' RT 16+50.00	858'	40'
2	16.00' RT 09+01.22	16.00' RT 36+14.49	1394'	45'

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°37'04" E	3946.13'
2	S 00°22'56" W	128.98'
3	N 56°47'46" E	771.32'

CURVE DATA

NO.	R	Δ	T	L
(1)	475.00'	128°35'10"	832.53'	999.70'

SCALE: 1"=100'

NEVADA AVE
"KNE" 0+00.00 PI
"KNE" 2+00.00 CONFORM
"KNE" 7+16.45 POT= "KNEC" 0+00.00 PI
"KNE" LINE
"KNE" 21+20.49 POT= "C2" 2622+21.78 POT
"C2" LINE
HST ROW
BNSF
BNSF ROW
SR 43
2615+00
2620+00
2625+00
2630+00
DRAINAGE DITCH (TYP)
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
32'
EP
R=60'
MBGR
CULVERT
"KNEC" 1+28.98 BC
"KNEC" 11+28.68 EC
"KNEC" LINE
TOE OF FILL
EXISTING CANAL
RET WALL NO.1
BB
CANAL REALIGNMENT
AT GRADE CROSSING
"KNEC" 18+42.83 CONFORM
"KNEC" 19+00.00 PI
TRACTION POWER FACILITY (NORTH OPTION)
TRACTION POWER FACILITY (SOUTH OPTION)
RET WALL NO.2
EB
ACCESS ROAD
MATCH LINE - SEE CT1240

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1239
SCALE AS SHOWN
SHEET NO. 2 OF 18

04/02/2014 - RFP No.: HSR13-57

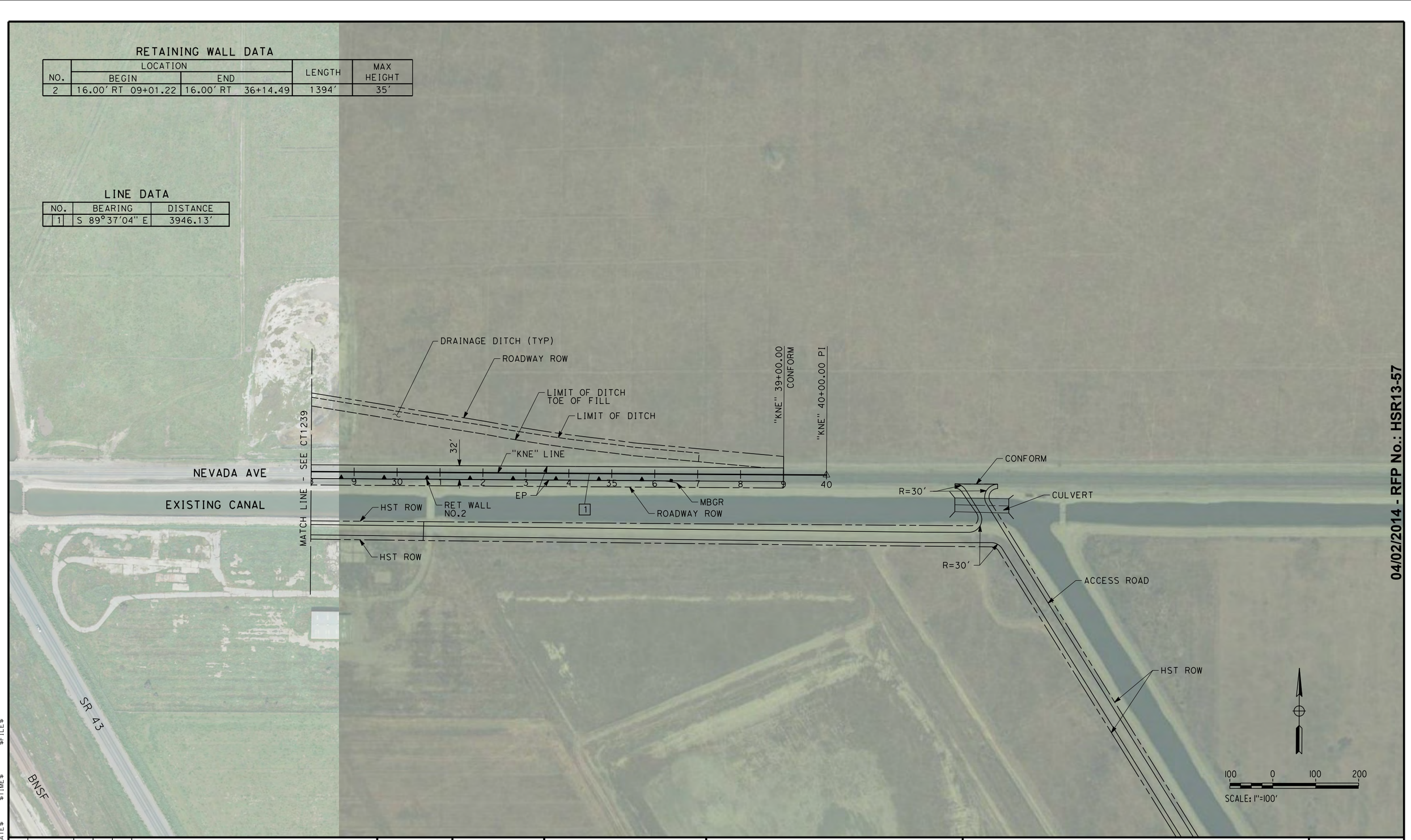
$FILE$ $TIME$ $DATE$ $USER$

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
2	16.00' RT 09+01.22	16.00' RT 36+14.49	1394'	35'

LINE DATA

NO.	BEARING	DISTANCE
1	S 89°37'04" E	3946.13'



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

$USER$ $DATE$ $TIME$ $FILE$

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1240
SCALE AS SHOWN
SHEET NO. 3 OF 18

LINE DATA

NO.	BEARING	DISTANCE
1	N56°25'17"E	57.54'
2	S89°10'45"E	362.55'
3	N51°33'15"E	1269.91'
4	S00°05'56"W	173.12'
5	S41°24'27"E	594.83'
6	S89°48'14"E	904.95'
7	S38°26'45"E	240.13'
8	S00°00'00"E	550.87'

CURVE DATA

NO.	R	Δ	T	L
①	350.00'	34°23'58"	108.34'	210.13'
②	2000.00'	39°16'00"	713.48'	1370.67'
③	425.00'	41°30'22"	161.04'	307.88'
④	425.00'	48°23'47"	190.99'	358.99'
⑤	500.00'	38°26'45"	174.34'	335.50'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	20.00' RT 12+67.68	20.00' RT 21+94.84	933'	40'
2	20.00' RT 28+19.66	20.00' RT 34+69.20	651'	45'
3	20.00' LT 14+43.11	76.73' LT 17+07.00	318'	14'

RADIO SITE (SOUTH OPTION)
HST ROW
ACCESS ROAD
5TH AVE
2750+00
CANAL REALIGNMENT
CANAL
2755+00
"K5A" 0+00.00 PI CONFORM
ROADWAY ROW
R=15'
TCE
"K5A" 1+73.12 BC
"K5A" 4+81.00 EC
"KWA" 27+74.35 POC= "K5A" 8+46.65 POT
"KWA" 30+00.89 EC
CORCORAN HWY (WAUKENA AVE)
LIMIT OF DITCH
LIMIT OF DITCH TOE OF FILL
RETAINING WALL NO. 2
"K5A" 10+75.83 BC
"K5A" 14+34.82 EC
"KWA" 39+67.50 "KOR" 10+00.00
"KWA" 42+70.81 PI CONFORM
R=60'
CULVERT
MBGR
ORANGE AVE CONNECTOR
"KOR" 12+40.13 BC
"KOR" 15+75.63 EC
TOE OF FILL
"KOR" LINE
EP
"K5A" 23+39.77 PI
"K5A" 22+57.76 CONFORM
DRAINAGE DITCH (TYP)
2760+00
EB
BB
MBGR (TYP)
"KWA" 12+67.68 EC
"KWA" 16+30.23 BC
RETAINING WALL NO. 3
CONFORM
"KWA" LINE
40'
"KWA" 10+57.54 BC CONFORM
"KWA" 10+00.00 PI
CORCORAN HWY (ORANGE AVE)
CULVERT
TCE
RETAINING WALL NO. 1
EXISTING CULVERT
R=40'
R=50'
CONFORM
"KWA" 26+62.61 POC= "C2" 2760+67.70 POC
8TH AVE - SR 43
2765+00
"C2" LINE
HST ROW
2770+00
"K5A" LINE
ORANGE AVE
R=15'
"KOR" 21+26.50 "K5A" 21+65.70
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

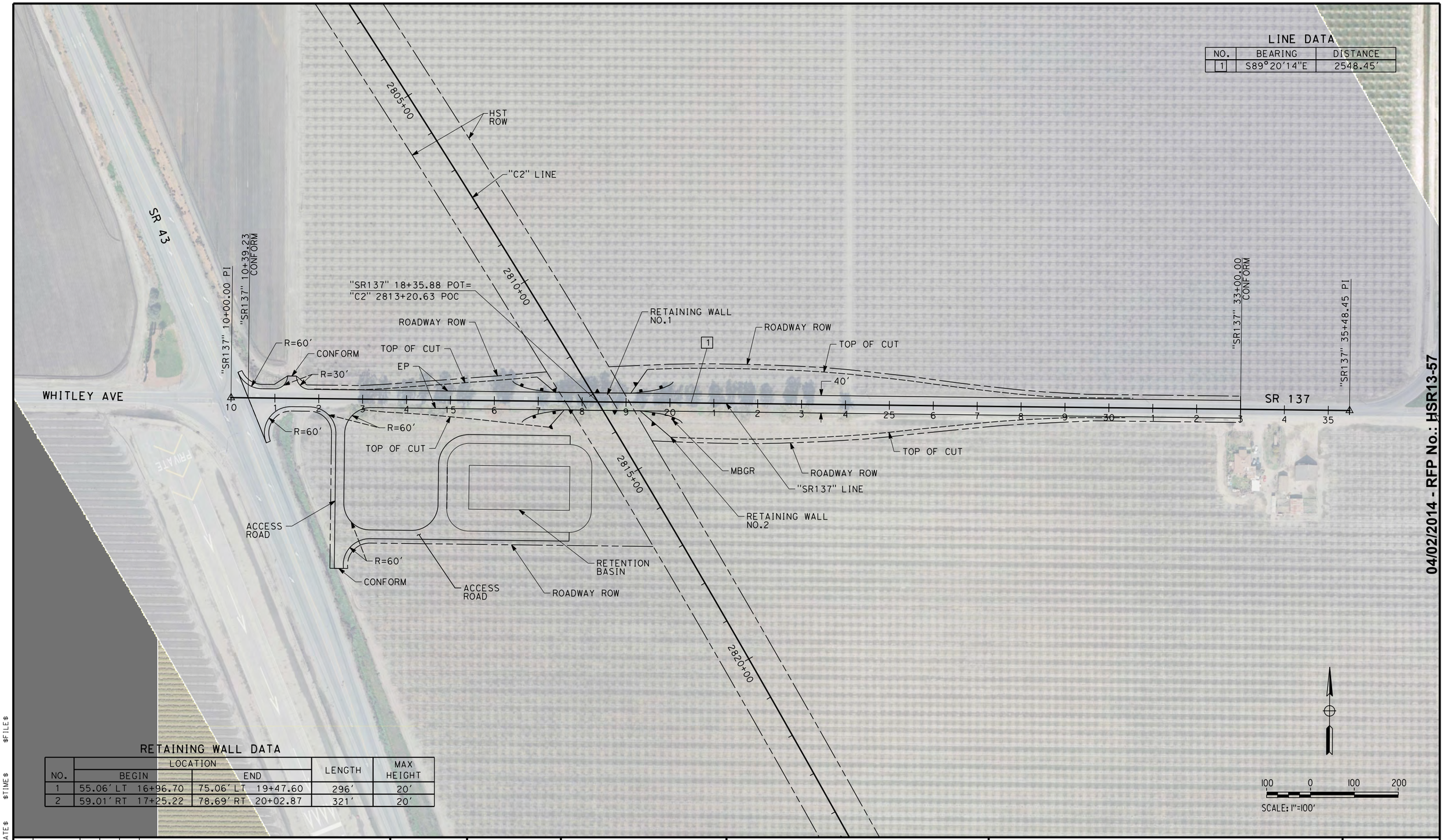
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
CORCORAN HWY

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1244
SCALE AS SHOWN
SHEET NO. 4 OF 18

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$



LINE DATA

NO.	BEARING	DISTANCE
1	S89°20'14"E	2548.45'

RETAINING WALL DATA

NO.	LOCATION BEGIN	LOCATION END	LENGTH	MAX HEIGHT
1	55.06' LT 16+96.70	75.06' LT 19+47.60	296'	20'
2	59.01' RT 17+25.22	78.69' RT 20+02.87	321'	20'

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

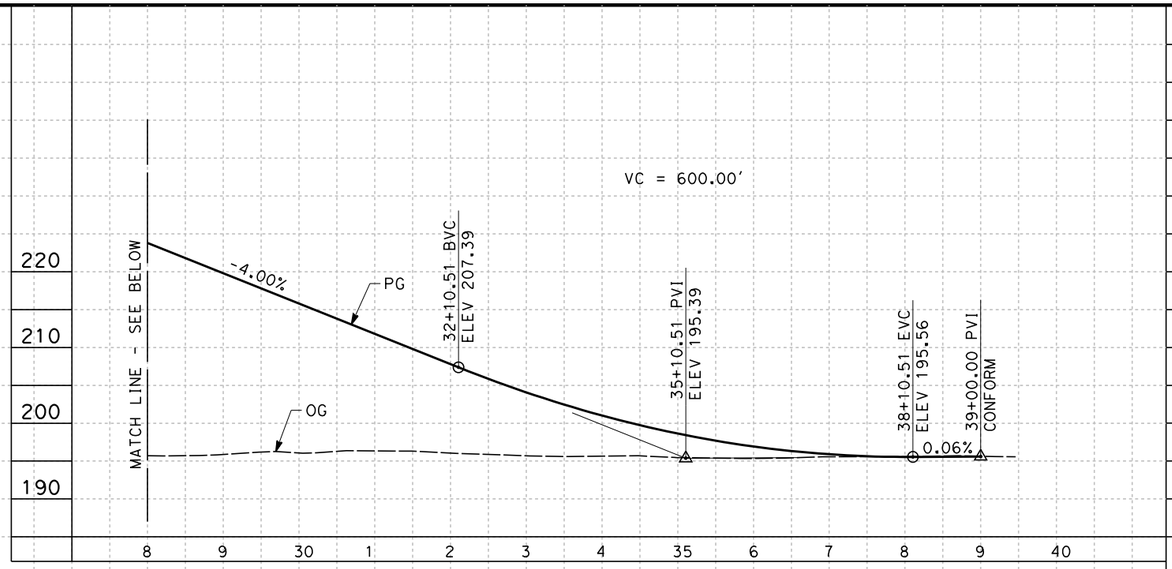
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION LAYOUT
WHITLEY AVE/STATE ROUTE 137

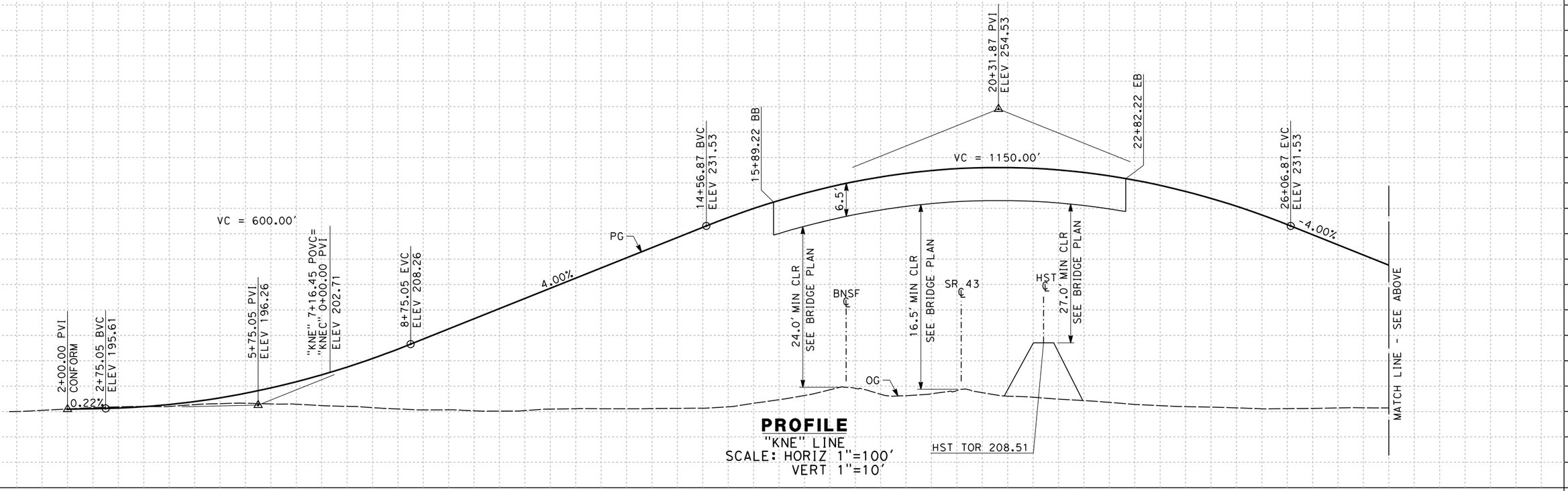
CONTRACT NO. HSR 06-0003
DRAWING NO. CT1248
SCALE AS SHOWN
SHEET NO. 5 OF 18

$FILE$ $TIME$ $DATE$ $USER$

NOTES:

1. MINIMUM VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER BNSF IS 24.0' FROM TOP OF RAIL
3. MINIMUM VERTICAL CLEARANCE OVER STATE HIGHWAY IS 16.5' FROM ROAD SURFACE





PROFILE
"KNE" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

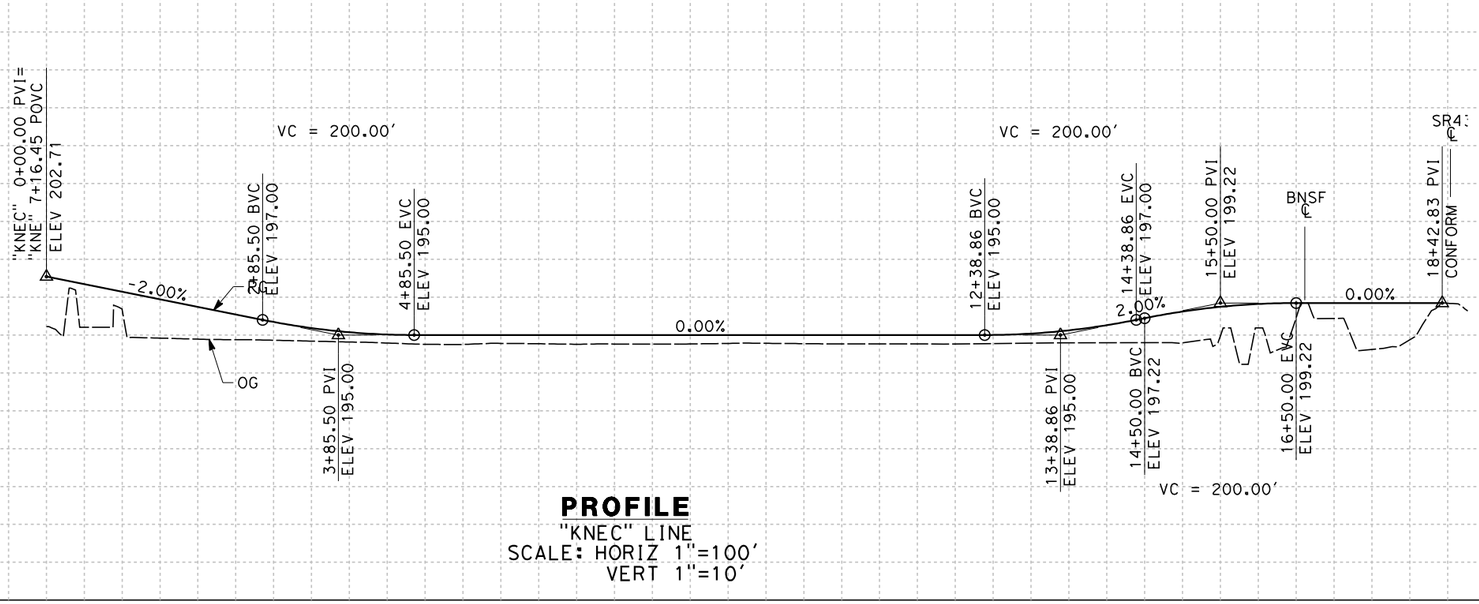
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
NEVADA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2239
SCALE AS SHOWN
SHEET NO. 6 OF 18

RFP NO: HSR13-57
04/02/2014

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PROFILE
"KNEC" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	TOTAL
CY Exc																				
CY Emb																				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

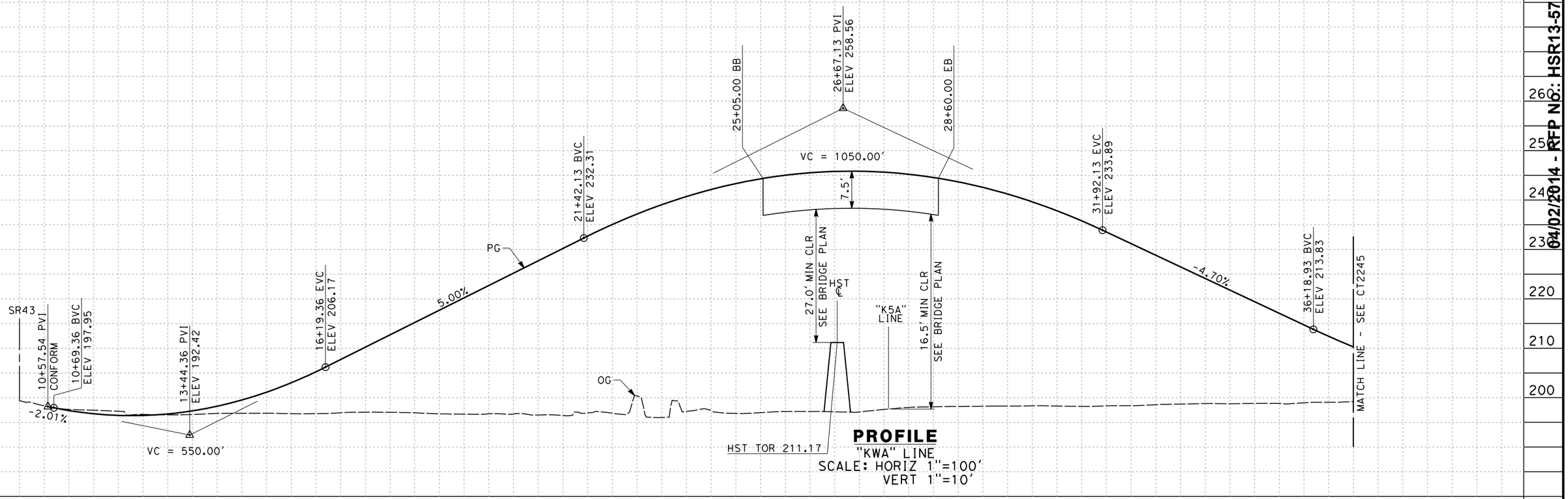
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
NEVADA AVE CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2240
SCALE AS SHOWN
SHEET NO. 7 OF 18

RFP No.: HSR13-57
04/02/2014

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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL
2. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE



PROFILE
"KWA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
CORCORAN HWY

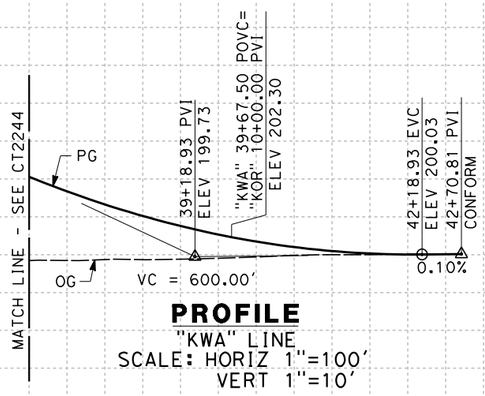
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2244
SCALE AS SHOWN
SHEET NO. 8 OF 18

RFP NO.: HSR13-57
04/02/2014

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joshua.thomas

04/02/2014 - RFP No.: HSR13-57



PROFILE
"KWA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		7	8	9	40	1	2	3	TOTAL
CY	Exc								
	Emb								

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

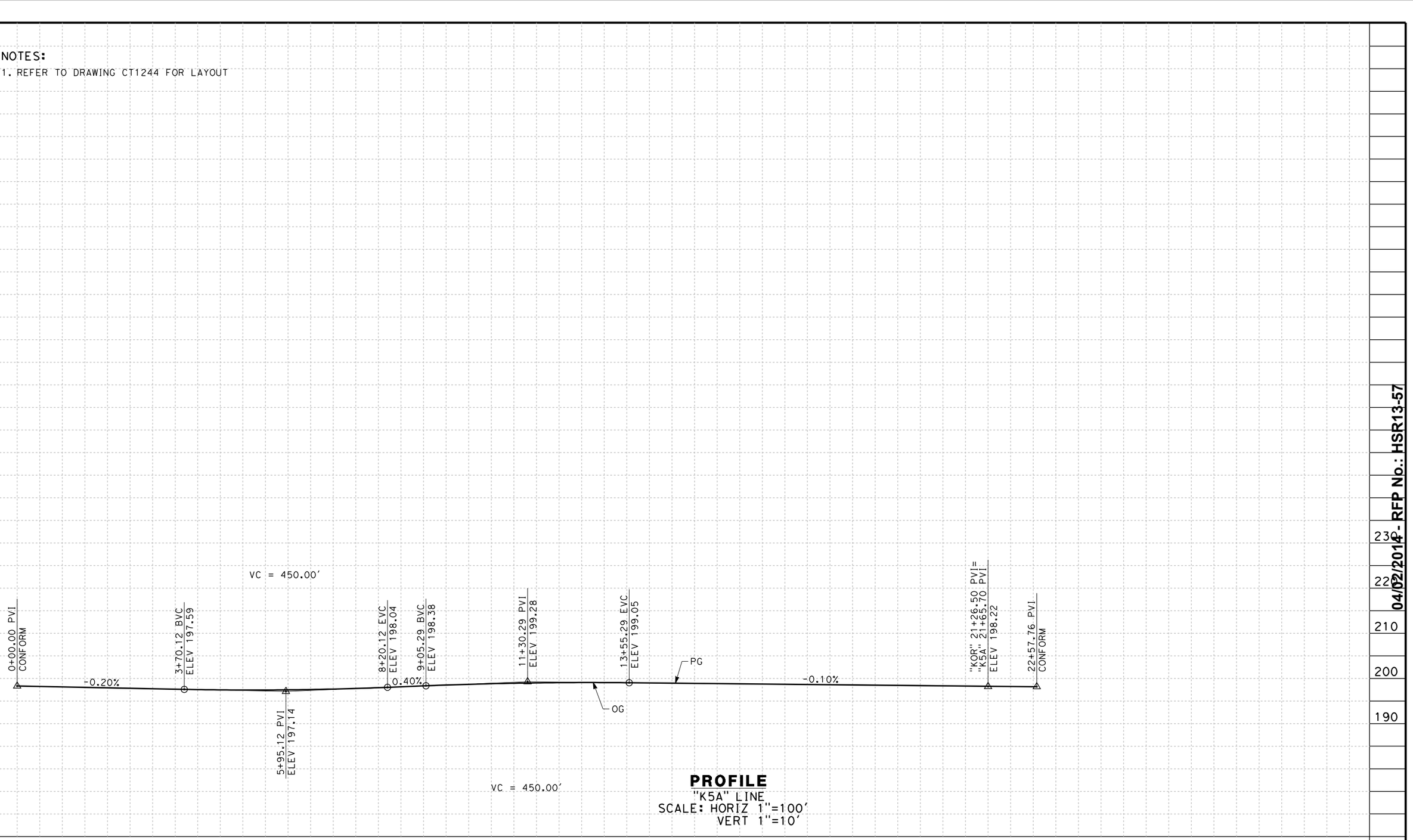
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
CORCORAN HWY

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2245
SCALE AS SHOWN
SHEET NO. 9 OF 18

NOTES:

1. REFER TO DRAWING CT1244 FOR LAYOUT



PROFILE
"K5A" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
5TH AVE

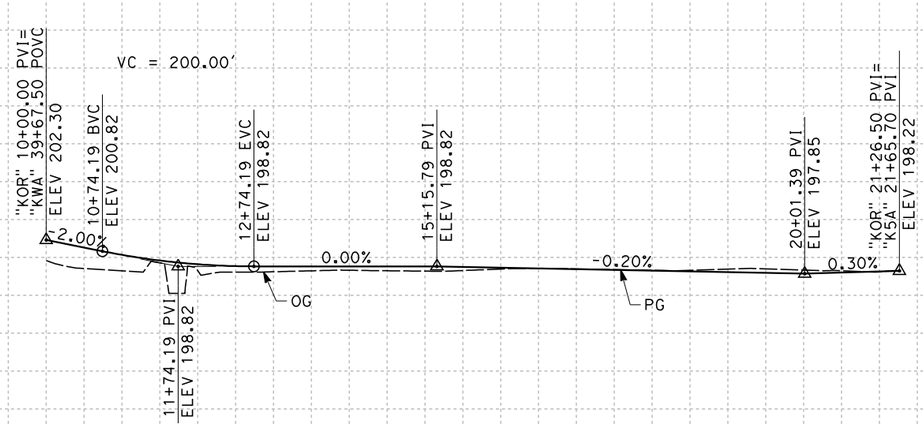
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2246
SCALE AS SHOWN
SHEET NO. 10 OF 18

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

NOTES:

1. REFER TO DRAWING CT1244 FOR LAYOUT



PROFILE

"KOR" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		10	1	2	3	4	15	6	7	8	9	20	1	2	3	TOTAL
CY	Exc															
	Emb															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

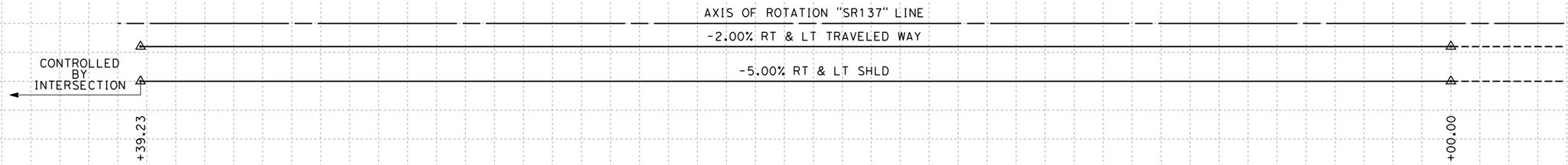
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEPARATION PROFILE
ORANGE AVE CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2247
SCALE AS SHOWN
SHEET NO. 11 OF 18

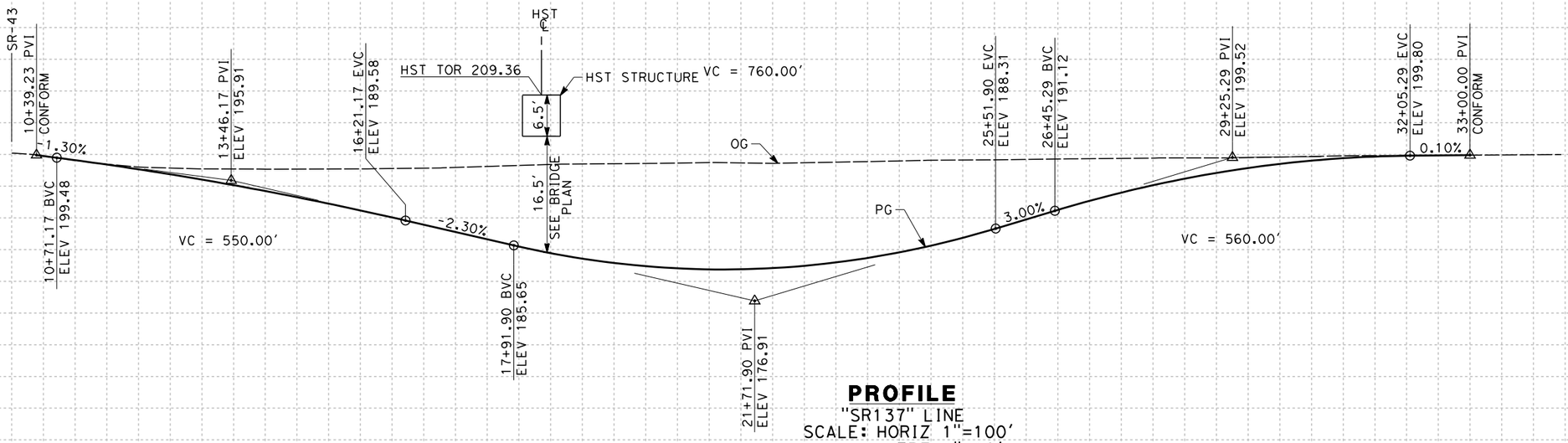
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NOTES:
1. MINIMUM VERTICAL CLEARANCE OVER STATE HIGHWAY IS 16.5' FROM ROAD SURFACE



SUPERELEVATION DIAGRAM



PROFILE
"SR137" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	TOTAL
CY Exc																									
CY Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

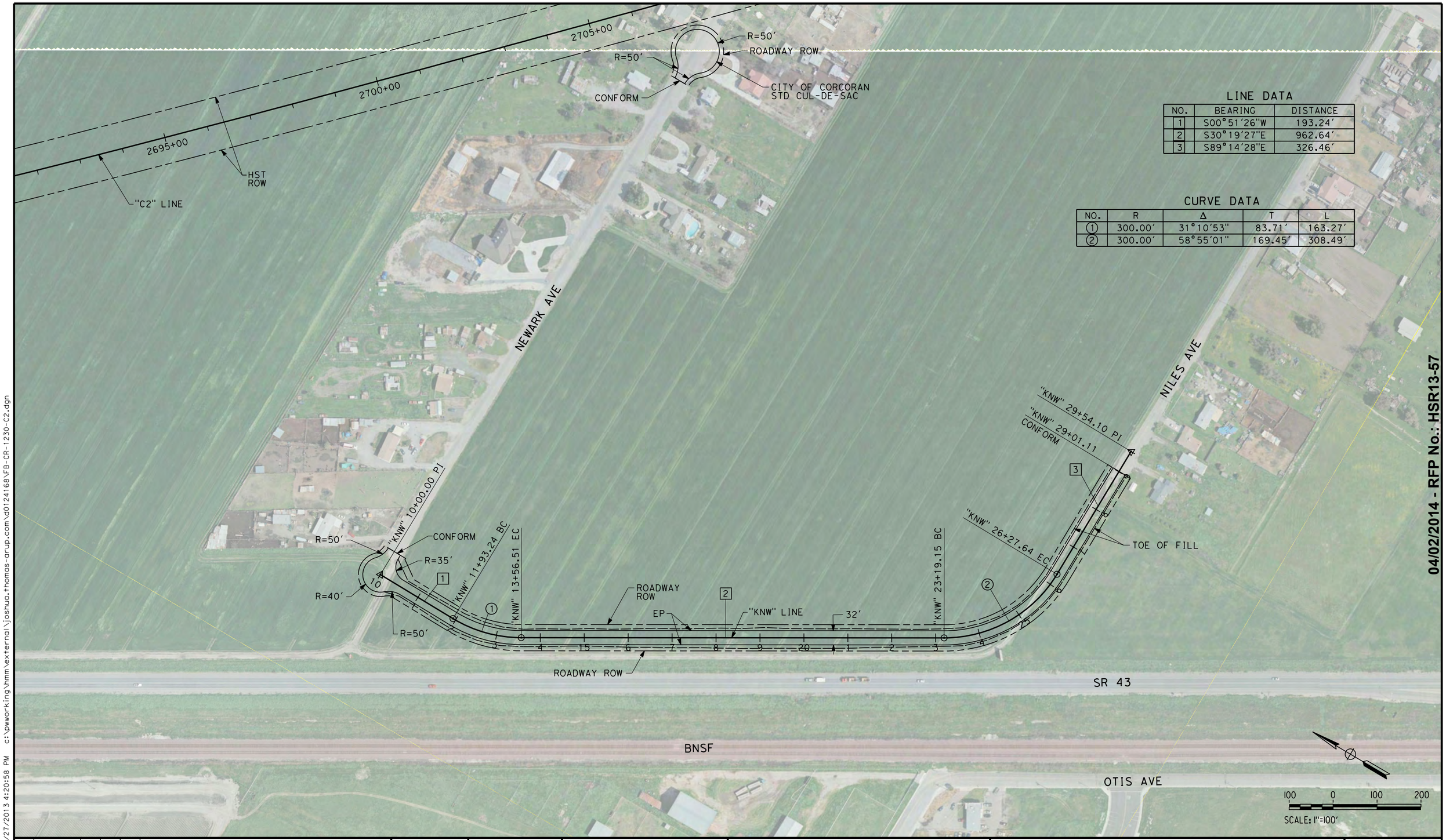
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
GRADE SEP PROFILE & SUPERELEVATION DIAGRAM
WHITLEY AVE/STATE ROUTE 137

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2248
SCALE AS SHOWN
SHEET NO. 12 OF 18

RFP NO: HSR13-57
04/02/2014

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LINE DATA

NO.	BEARING	DISTANCE
1	S00°51'26"W	193.24'
2	S30°19'27"E	962.64'
3	S89°14'28"E	326.46'

CURVE DATA

NO.	R	Δ	T	L
①	300.00'	31°10'53"	83.71'	163.27'
②	300.00'	58°55'01"	169.45'	308.49'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD

CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY LAYOUT
NILES AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1230
SCALE AS SHOWN
SHEET NO. 13 OF 18

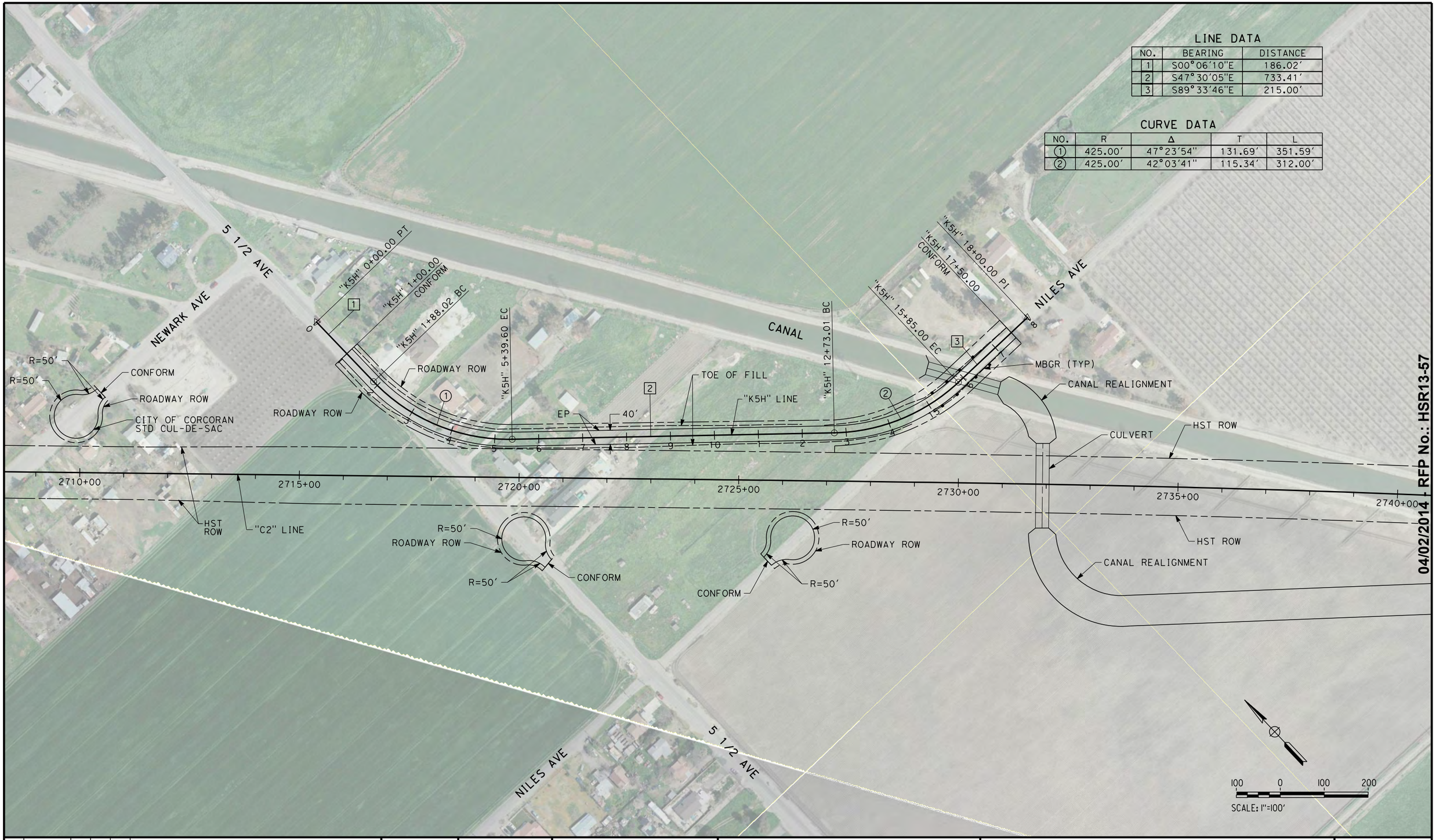
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LINE DATA

NO.	BEARING	DISTANCE
1	S00°06'10"E	186.02'
2	S47°30'05"E	733.41'
3	S89°33'46"E	215.00'

CURVE DATA

NO.	R	Δ	T	L
①	425.00'	47°23'54"	131.69'	351.59'
②	425.00'	42°03'41"	115.34'	312.00'



04/02/2014 - RFP No.: HSR13-57

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

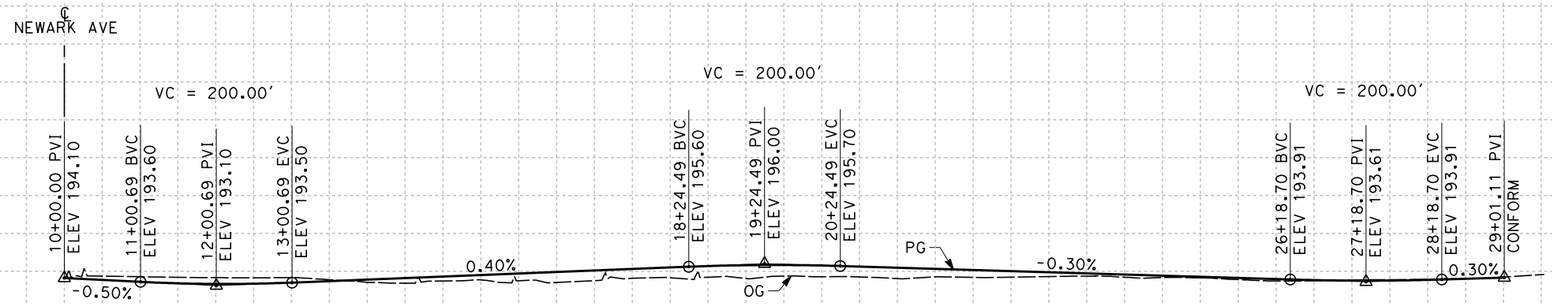
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY LAYOUT
5 ½ AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR1231
SCALE AS SHOWN
SHEET NO. 14 OF 18



PROFILE

"KNW" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	TOTAL
CY Exc																						
CY Emb																						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

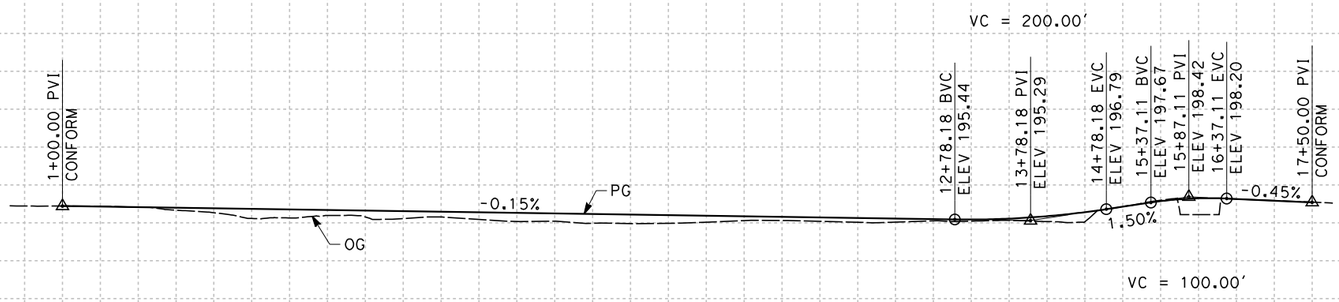
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY PROFILE
NILES AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2230
SCALE AS SHOWN
SHEET NO. 15 OF 18

RFP NO.: HSR13-57 - 04/02/2014

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04/02/2014 - RFP No.: HSR13-57



PROFILE

"K5H" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	TOTAL
CY Exc																			
CY Emb																			

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

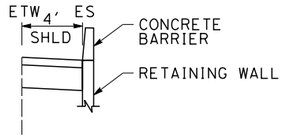
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY PROFILE
5 1/2 AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CR2231
SCALE AS SHOWN
SHEET NO. 16 OF 18

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NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

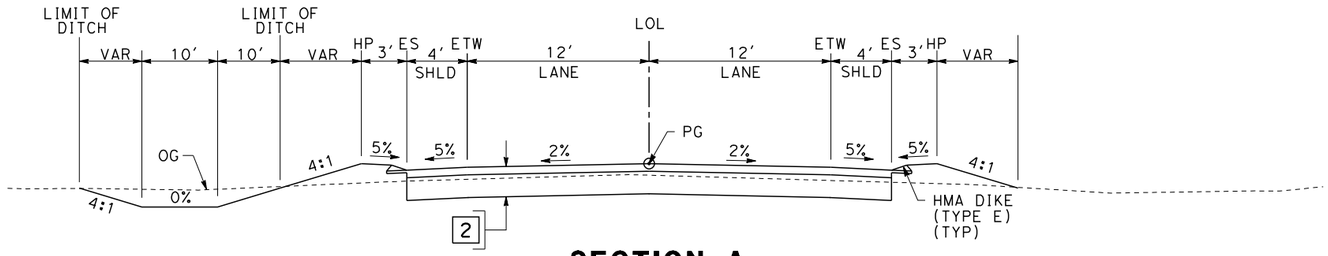


STRUCTURAL SECTIONS

TYPICAL ROADWAY

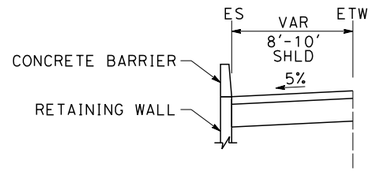
1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB

2 — 0.50' HMA (TYPE A)
1.50' CL 2 AB



SECTION A

"KNE" 4+50.00 TO 15+89.22
"KNE" 22+82.22 TO 37+00.00



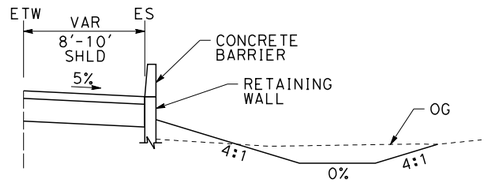
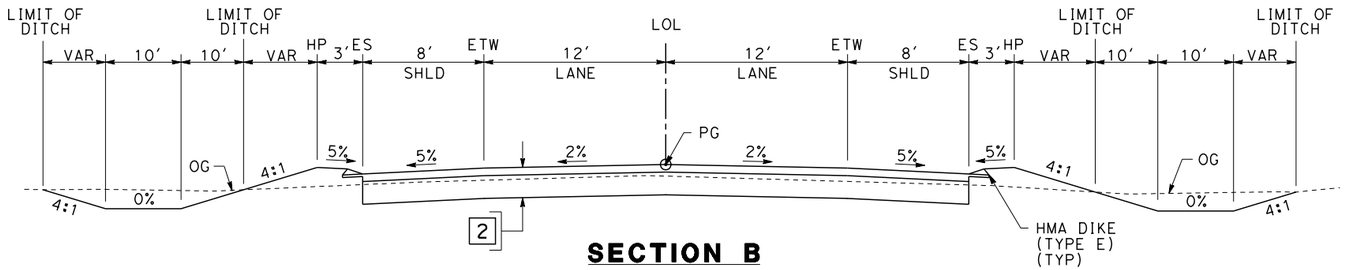


TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED (MPH)	CRITERIA/JURISDICTION
NEVADA AVE	KNE	50	KINGS CO/KINGS CO
NEVADA AVE CONNECTOR	KNEC	25	KINGS CO/KINGS CO
CORCORAN HIGHWAY	KWA	45	HDM/CITY OF CORCORAN
5TH AVE / ORANGE AVE	K5A	35	HDM/CITY OF CORCORAN
ORANGE AVE CONNECTOR	KOR	35	HDM/CITY OF CORCORAN
WHITLEY AVE (STATE ROUTE 137)	SR137	55	HDM/CALTRANS
NILE AVE	KNW	25	HDM/CITY OF CORCORAN
5 1/2 AVE	K5H	25	HDM/CITY OF CORCORAN



SECTION B

"KWA" 10+57.54 TO 25+05.00
"KWA" 28+60.00 TO 41+00.00

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. POLING
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BROWN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

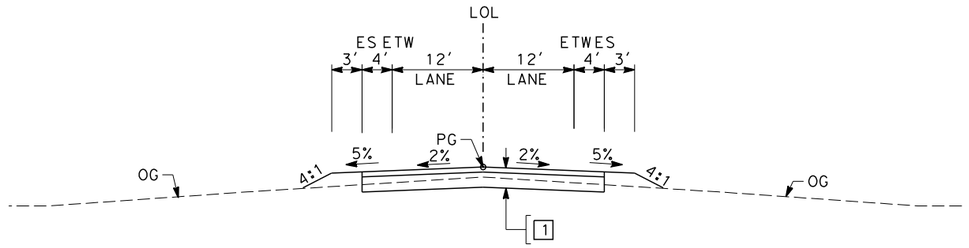
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

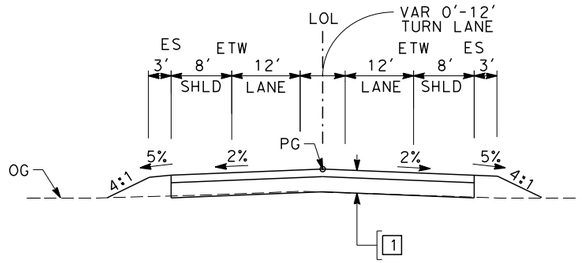
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3042
SCALE NO SCALE
SHEET NO. 17 OF 18

04/02/2014 - RFP No.: HSR13-57



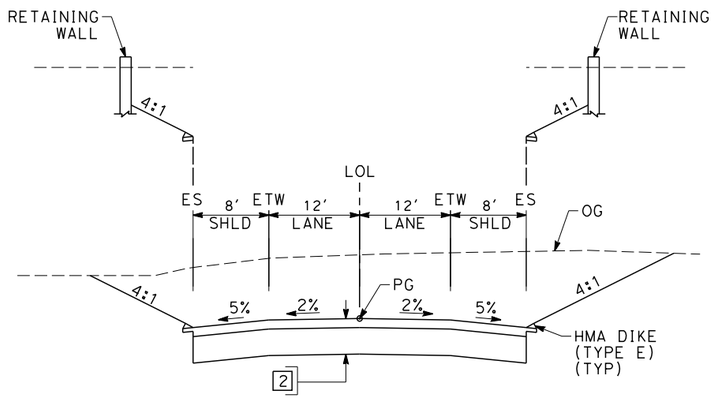
SECTION C

"KNEC" 0+00.00 TO 18+42.83
"KNW" 10+00.00 TO 29+01.11
"K5H" 1+00.00 TO 17+50.00
"K5A" 0+00.00 TO 22+57.76
"KNE" 2+00.00 TO 4+50.00
"KNE" 37+00.00 TO 39+00.00



SECTION D

"KOR" 10+00.00 TO 21+26.50
"KWA" 41+00.00 TO 42+70.81



SECTION E

"SR137" 10+39.23 TO 33+00.00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: A. POLING
DRAWN BY: E. SUDHAUSEN
CHECKED BY: S. BROWN
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

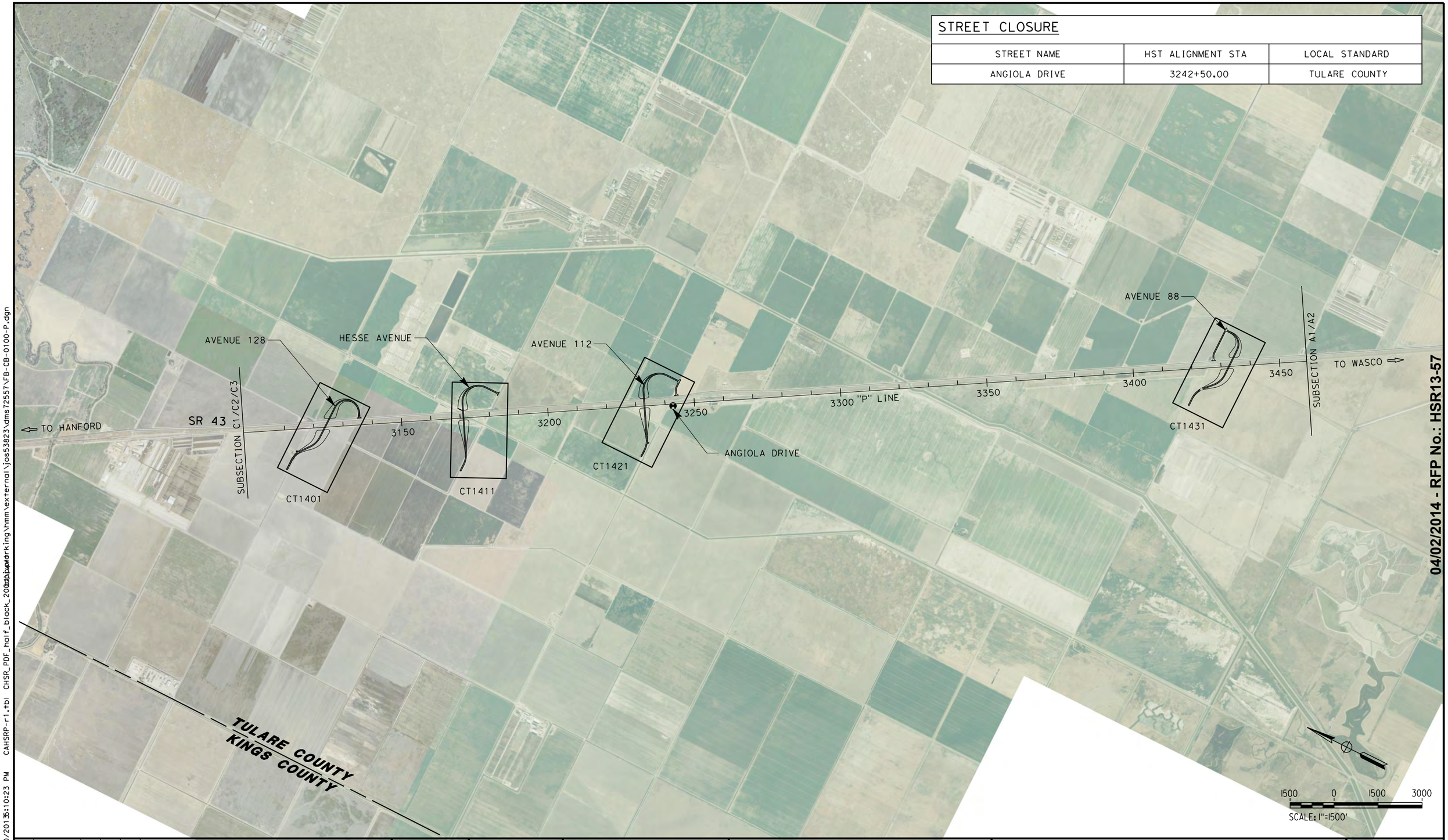
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3043
SCALE NO SCALE
SHEET NO. 18 OF 18

04/02/2014 - RFP No.: HSR13-57

$USER$ $DATE$ $TIME$ $FILE$

STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
ANGIOLA DRIVE	3242+50.00	TULARE COUNTY



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

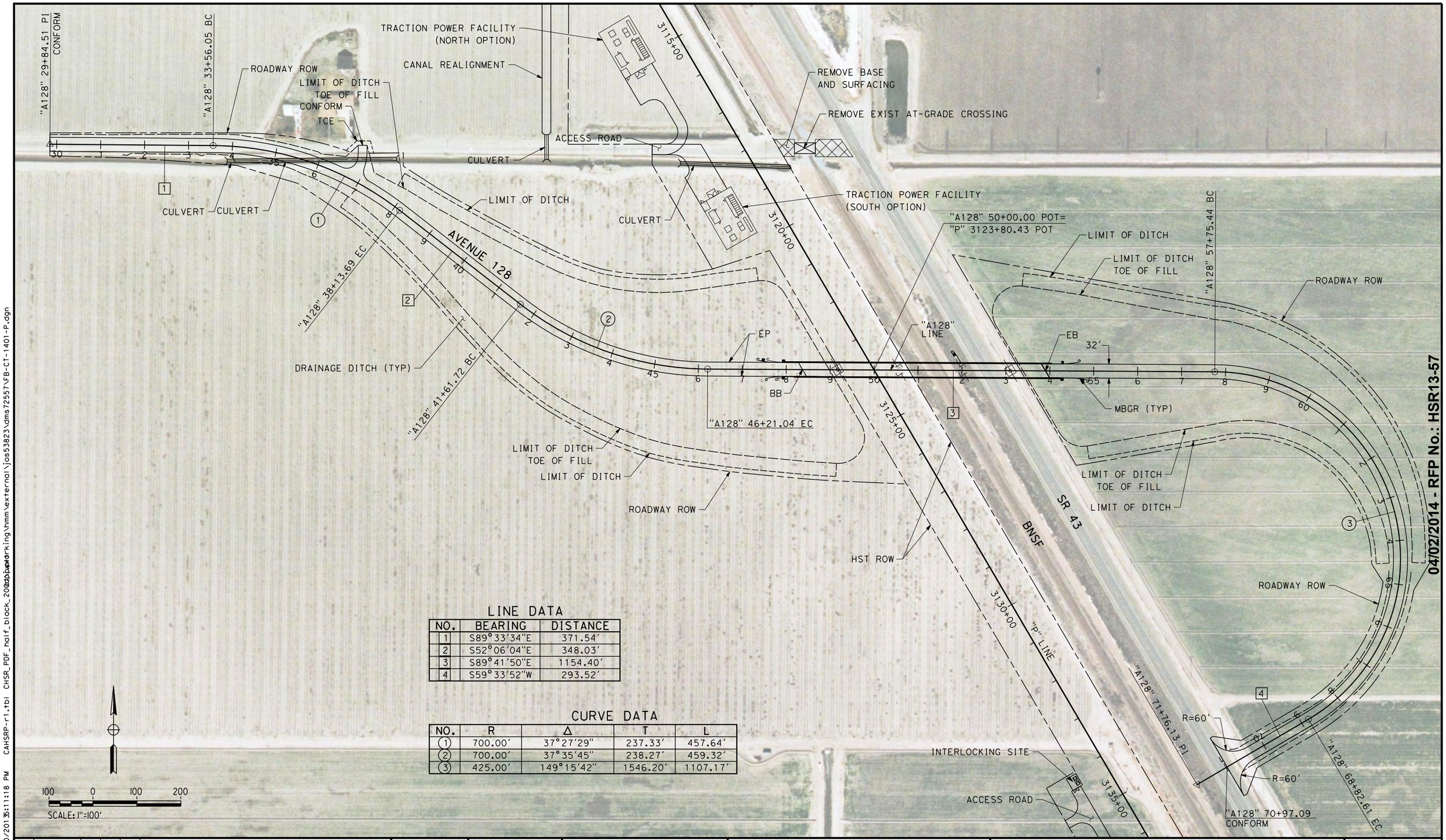
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
ROADWAY/GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0100
SCALE AS SHOWN
SHEET NO. 1 OF 16

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JOS53823



LINE DATA

NO.	BEARING	DISTANCE
1	S89°33'34"E	371.54'
2	S52°06'04"E	348.03'
3	S89°41'50"E	1154.40'
4	S59°33'52"W	293.52'

CURVE DATA

NO.	R	Δ	T	L
(1)	700.00'	37°27'29"	237.33'	457.64'
(2)	700.00'	37°35'45"	238.27'	459.32'
(3)	425.00'	149°15'42"	1546.20'	1107.17'

100 0 100 200
SCALE: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: I .JOSIFEK
DRAWN BY: V. ORTEGA
CHECKED BY: T. CLIFFORD
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION LAYOUT
AVE 128

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1401
SCALE AS SHOWN
SHEET NO. 2 OF 16

04/02/2014 - RFP No.: HSR13-57

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"HA" 30+69.18 PI
"HA" 31+54.66
CONFORM
"HA" 34+04.66 BC
CANAL REALIGNMENT
HST ROW
ROADWAY ROW
ACCESS ROAD
"HA" 37+76.37 EC
LIMIT OF DITCH
LIMIT OF DITCH
TOE OF FILL
"HA" 50+00.00 POT=
"P" 3171+12.73 POT
3170+00
MBGR (TYP)
"HA" LINE
HESSE AVENUE
BB
R=60'
CULVERT
DRAINAGE DITCH (TYP)
LIMIT OF DITCH
TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
CANAL REALIGNMENT
REMOVE BASE AND SURFACING (TYP)
REMOVE EXISTING BRIDGE
3180+00
3185+00
"P" LINE
3175+00
CULVERT
HST ROW
BNSF
SR 43
ROAD 36
RETAINING
WALL NO.1
ROADWAY ROW
LIMIT OF DITCH
LIMIT OF DITCH
TOE OF FILL
EB
32'
EP
"HA" 55+16.18 BC
LIMIT OF DITCH
LIMIT OF DITCH
TOE OF FILL
ROADWAY ROW
"HA" 66+72.18 EC
REMOVE EXIST
AT-GRADE CROSSING
HESSE AVENUE
R=60'
R=60'
"HA" 71+55.12
CONFORM
"HA" 72+69.18 PI
100 0 100 200
SCALE: 1"=100'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	25.58 LT "HA" 52+60.46	168.45 LT "HA" 53+40.50	164'	20'

LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	335.48'
2	N59°34'31"E	1739.81'
3	S00°00'00"W	597.01'

CURVE DATA

NO.	R	Δ	T	L
(1)	700.00'	30°25'29"	190.35'	371.71'
(2)	550.00'	120°25'29"	960.84'	1155.99'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION LAYOUT
HESSE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1411
SCALE AS SHOWN
SHEET NO. 3 OF 16

04/02/2014 - RFP No.: HSR13-57

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LINE DATA

NO.	BEARING	DISTANCE
1	N90°00'00"E	312.70'
2	N59°34'31"E	1657.59'
3	S00°00'05"W	501.99'
11	S89°59'55"E	287.00'
12	N55°52'54"E	240.00'

CURVE DATA

NO.	R	Δ	T	L
(1)	700.00'	30°25'29"	190.35'	371.71'
(2)	550.00'	120°25'34"	960.86'	1156.01'
(3)	290.00'	89°59'54"	88.99'	172.70'

3225+00
3230+00
3235+00
3240+00
3245+00
CULVERT (EXTEND EXISTING CULVERT)
CANAL REALIGNMENT
LIMIT OF DITCH TOE OF FILL
LIMIT OF DITCH
ROADWAY ROW
EB AVENUE 112
"A112" LINE
BB
MBGR (TYP)
EP
"A112" 50+00.00 POT= "P" 3232+97.60 POT
"A112" 55+16.08 BC
"A112" 66+72.09 EC
BNSF
SR 43
"P" LINE
HST ROW
CULVERT
"A112" 31+74.08 PI
"A112" 34+86.79 BC
"A112" 38+58.50 EC
"A112" 32+36.79 CONFORM
DRAINAGE DITCH (TYP)
R=25'
CONFORM
RADIO SITE (NORTH OPTION)
ACCESS ROAD
REMOVE BASE AND SURFACING
RADIO SITE (SOUTH OPTION)
ROAD 40
ANGIOLA DRIVE
REMOVE EXIST AT-GRADE CROSSING
"A112_C" 12+40.10 BC
"A112_C" 14+12.80 EC
"A112_C" 16+71.14
"A112_C" 17+00.00 PI
CONFORM
"A112" 71+48.16 POT= "A112_C" 15+95.15 POT
"A112" 71+74.08 PI
"A112_C" 11+00.00 CONFORM
"A112_C" LINE
"A112_C" 10+00.00 PI
R=60'
100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $PLTDRVS$ $PENTBLS$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

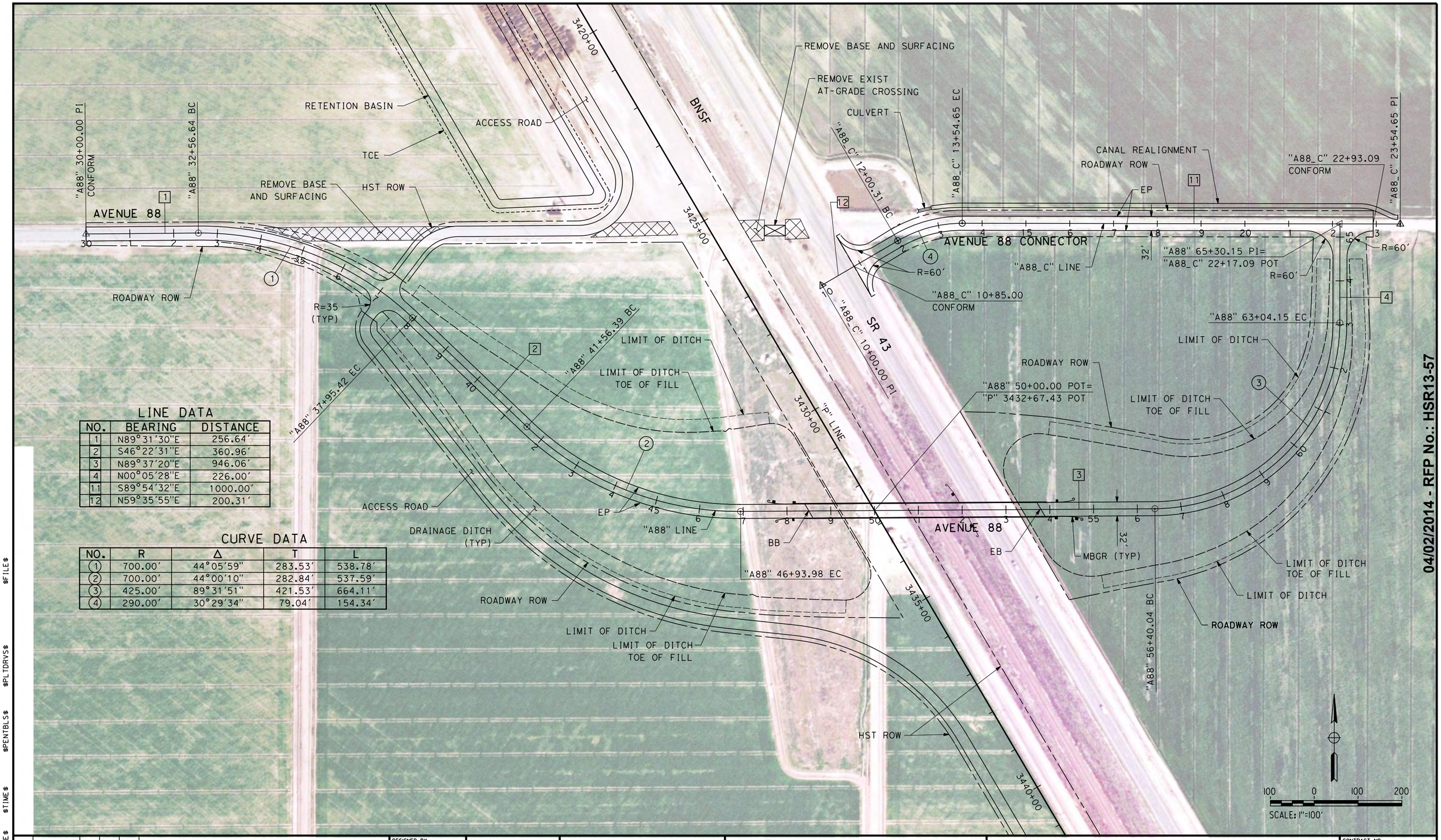
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION LAYOUT
AVE 112

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1421
SCALE AS SHOWN
SHEET NO. 4 OF 16



LINE DATA

NO.	BEARING	DISTANCE
1	N89°31'30"E	256.64'
2	S46°22'31"E	360.96'
3	N89°37'20"E	946.06'
4	N00°05'28"E	226.00'
11	S89°54'32"E	1000.00'
12	N59°35'55"E	200.31'

CURVE DATA

NO.	R	Δ	T	L
(1)	700.00'	44°05'59"	283.53'	538.78'
(2)	700.00'	44°00'10"	282.84'	537.59'
(3)	425.00'	89°31'51"	421.53'	664.11'
(4)	290.00'	30°29'34"	79.04'	154.34'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $PLTDRVS$ $PENTBLS$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

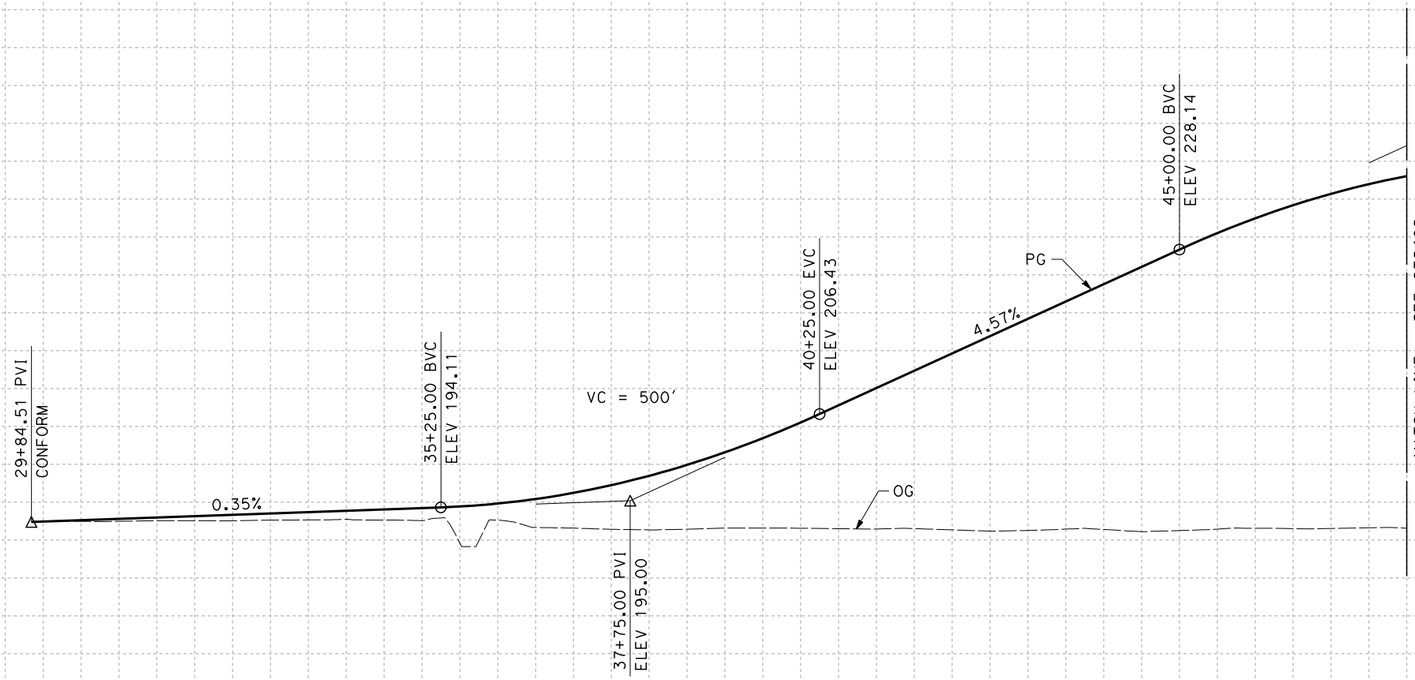
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION LAYOUT
AVE 88

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1431
SCALE AS SHOWN
SHEET NO. 5 OF 16

NOTES:
1. MIN VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL.
2. MIN VERTICAL CLEARANCE OVER BNSF IS 24' FROM TOP OF RAIL.
3. MIN VERTICAL CLEARANCE OVER SR 43 IS 16.5' FROM ROADWAY SURFACE.



PROFILE
"A128" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	TOTAL
CY	Exc																							
	Emb																							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

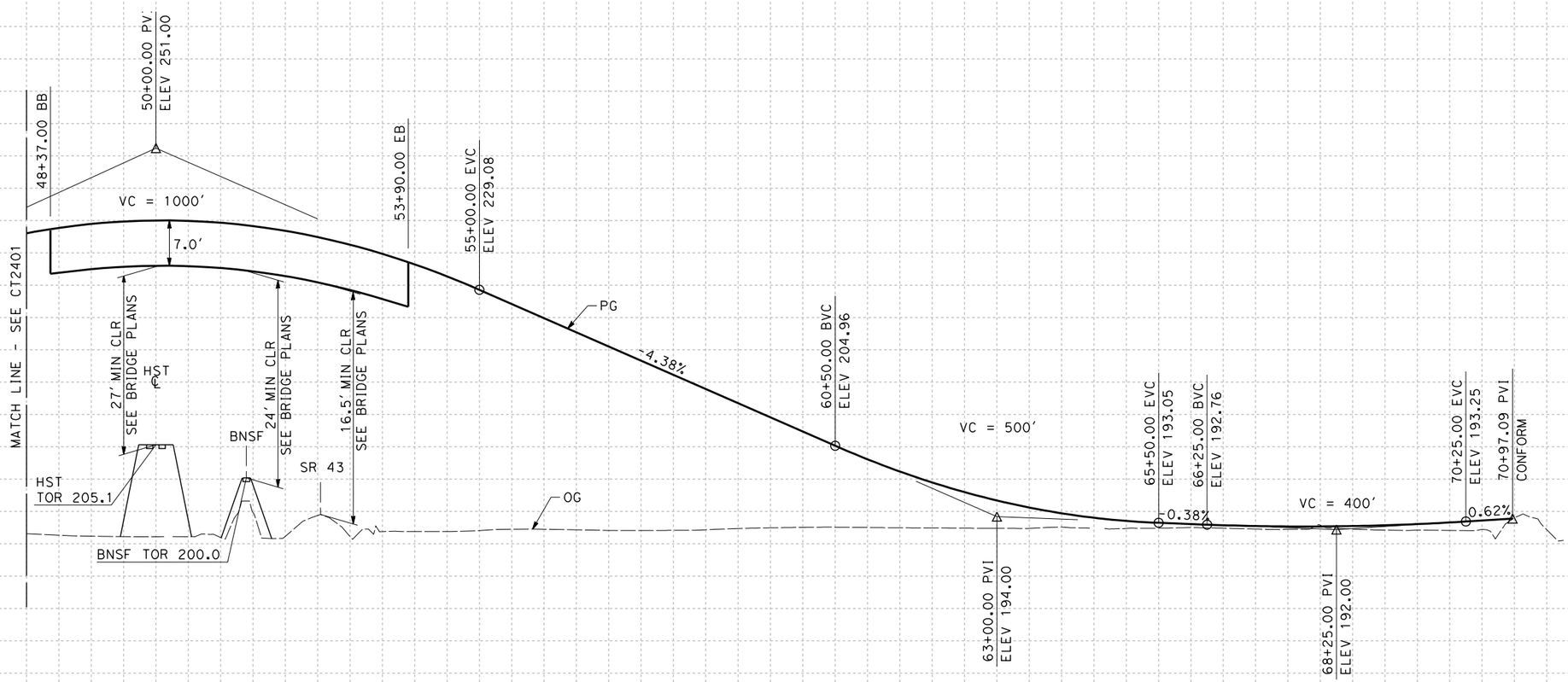
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 128

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2401
SCALE AS SHOWN
SHEET NO. 6 OF 16

04/02/2014 - RFP No.: HSR13-67

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PROFILE
"A128" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	TOTAL
CY Exc																										
CY Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

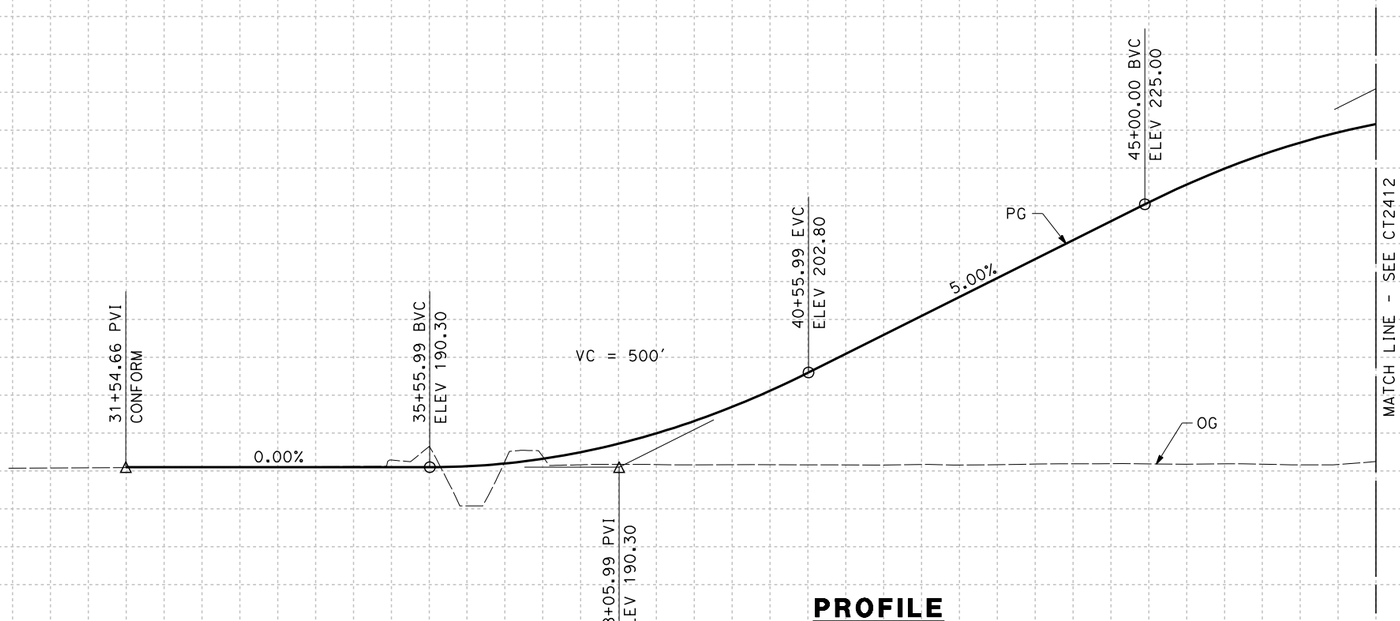
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 128

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2402
SCALE AS SHOWN
SHEET NO. 7 OF 16

RFP No.: HSR13-57
04/02/2014

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JOS53823

NOTES:
1. MIN VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL.
2. MIN VERTICAL CLEARANCE OVER BNSF IS 24' FROM TOP OF RAIL.
3. MIN VERTICAL CLEARANCE OVER SR 43 IS 16.5' FROM ROADWAY SURFACE.



PROFILE
"HA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	TOTAL
CY Exc																				
CY Emb																				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

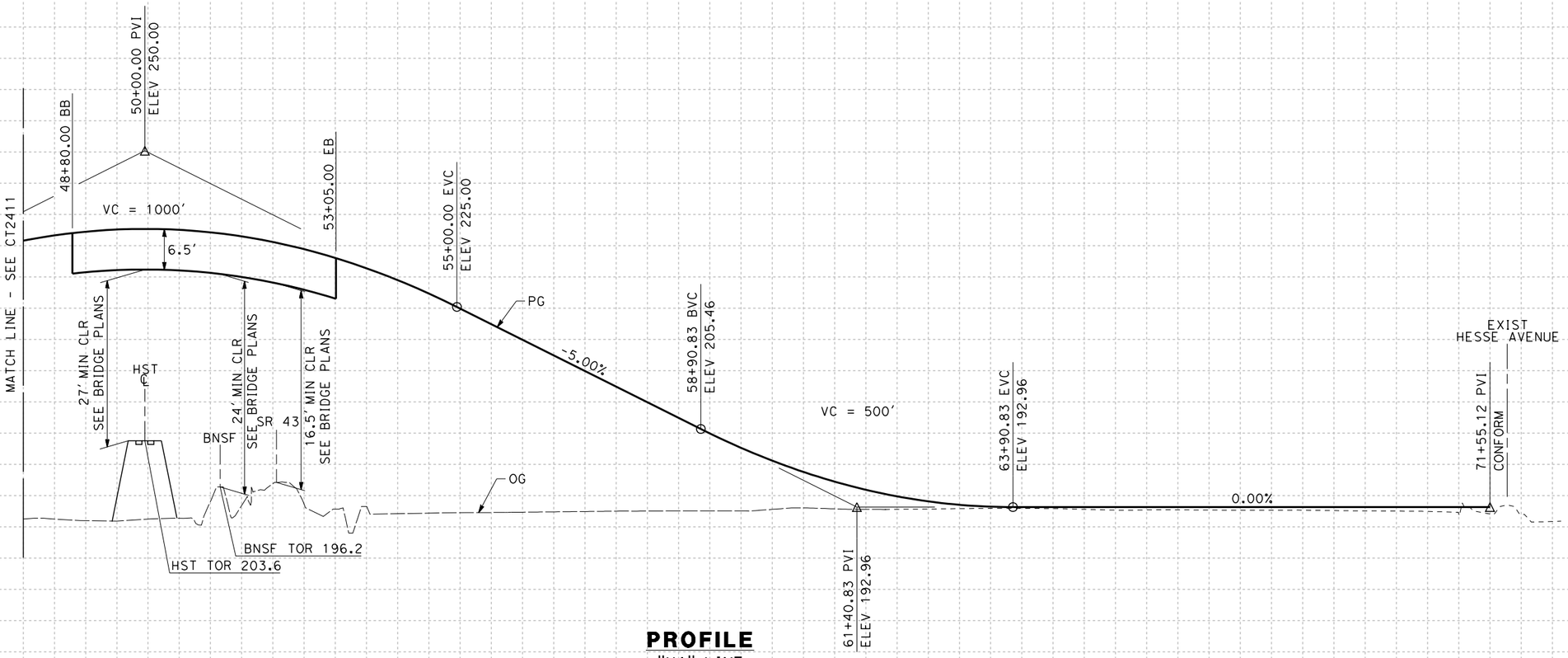
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
HESSE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2411
SCALE AS SHOWN
SHEET NO. 8 OF 16

RFP No: HSR13-57
04/02/2014 - RFP No

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JOS53823



PROFILE
"HA" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	TOTAL
CY	Exc																										
	Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
HESSE AVE

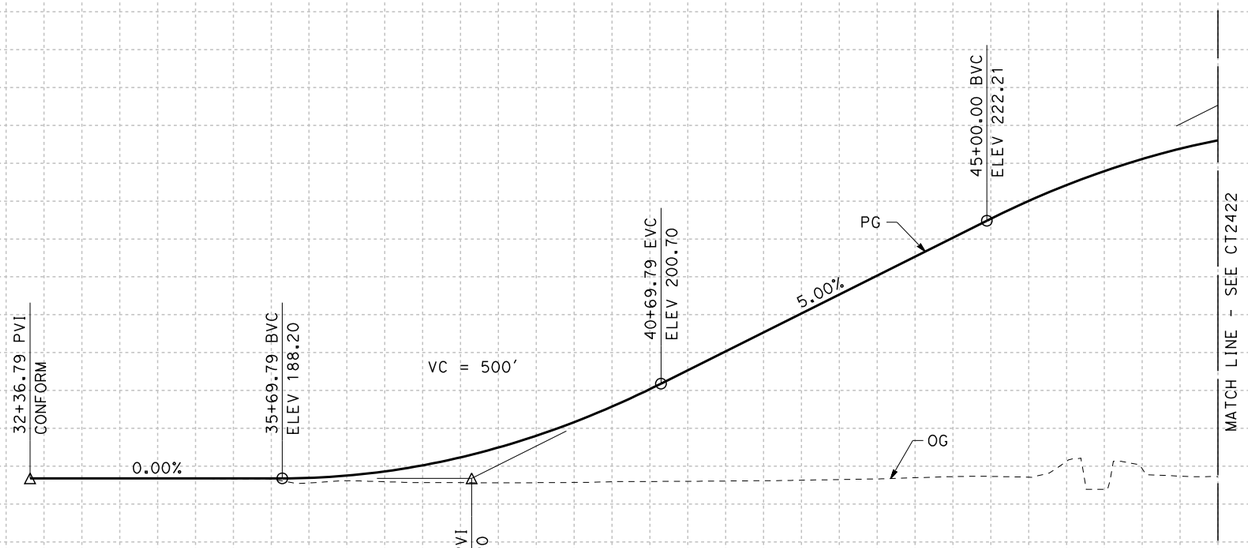
CONTRACT NO.
DRAWING NO. CT2412
SCALE AS SHOWN
SHEET NO. 9 OF 16

RFP No: HSR13-57
04/02/2014

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NOTES:

1. MIN VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL.
2. MIN VERTICAL CLEARANCE OVER BNSF IS 24' FROM TOP OF RAIL.
3. MIN VERTICAL CLEARANCE OVER SR 43 IS 16.5' FROM ROADWAY SURFACE.



PROFILE
"A112" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	TOTAL
CY	Exc																				
	Emb																				

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

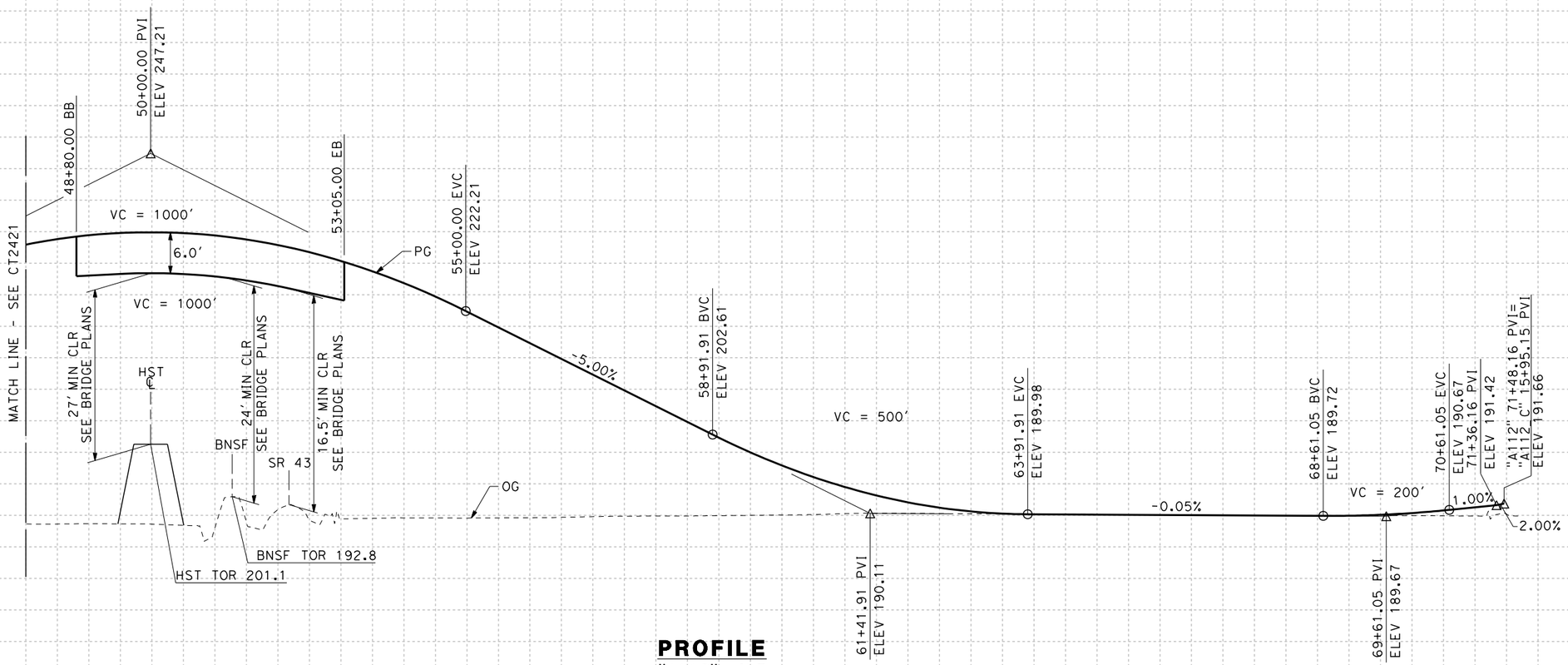
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 112

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2421
SCALE AS SHOWN
SHEET NO. 10 OF 16

04/02/2014 - RFP No: HSR13-57

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PROFILE
"A112" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65	6	7	8	9	70	1	2	3	TOTAL
CY Exc																											
CY Emb																											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

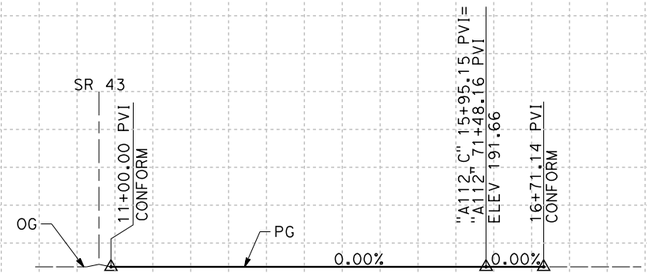
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 112

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2422
SCALE AS SHOWN
SHEET NO. 11 OF 16

RFP No.: HSR13-57
04/02/2014

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NOTES:
1. SEE SHEET CT1421 FOR LAYOUT VIEW



PROFILE

"A112_C" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	TOTAL
CY Exc										
CY Emb										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 112 CONNECTOR

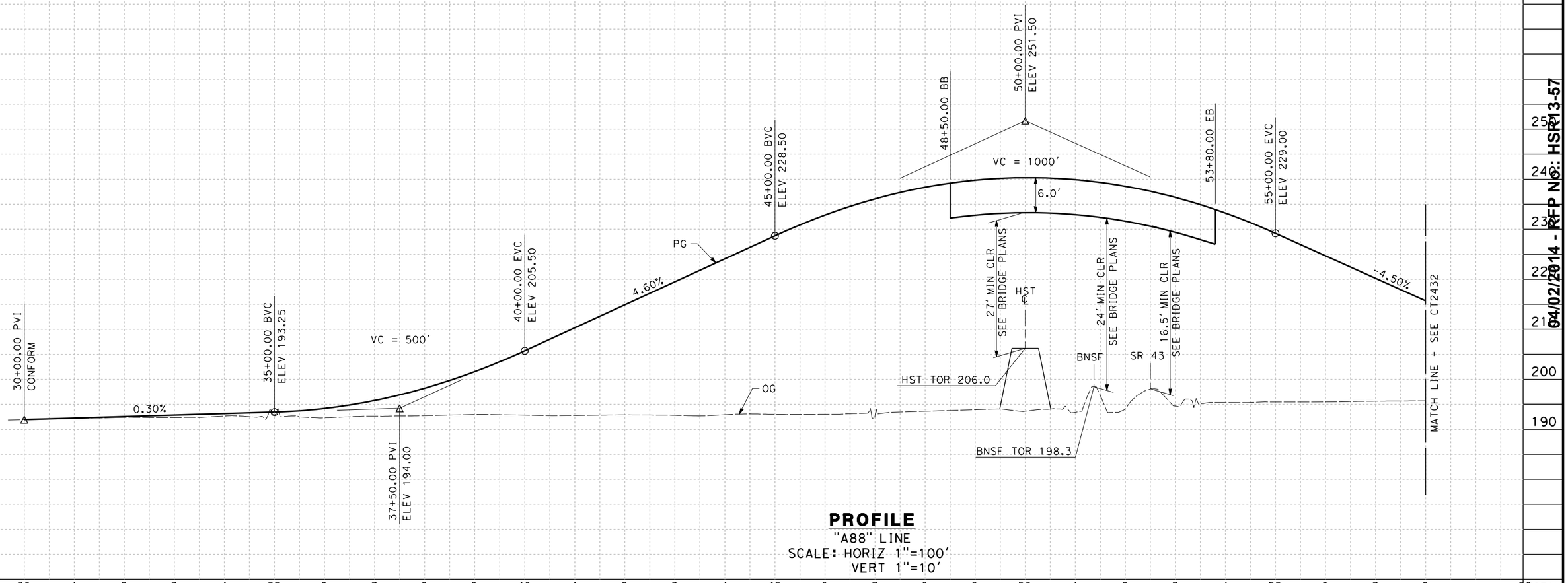
CONTRACT NO. HSR 06-0003
DRAWING NO. CT2423
SCALE AS SHOWN
SHEET NO. 12 OF 16

04/02/2014 - RFP No.: HSR13-57

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NOTES:

1. MIN VERTICAL CLEARANCE OVER HST IS 27′ FROM TOP OF RAIL.
2. MIN VERTICAL CLEARANCE OVER BNSF IS 24′ FROM TOP OF RAIL.
3. MIN VERTICAL CLEARANCE OVER SR 43 IS 16.5′ FROM ROADWAY SURFACE.



PROFILE

"A88" LINE
SCALE: HORIZ 1"=100′
VERT 1"=10′

STATION	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	50	TOTAL
CY Exc																															
CY Emb																															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 88

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2431
SCALE AS SHOWN
SHEET NO. 13 OF 16

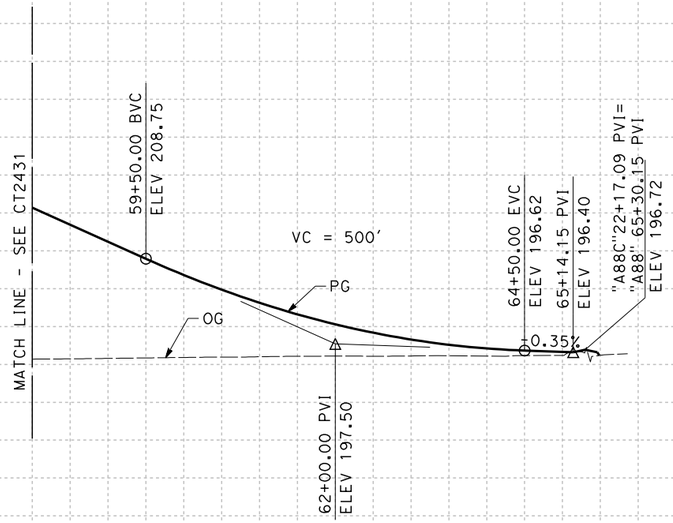
RFP No: HSR13-57
04/02/2014 - RFP No: HSR13-57

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04/02/2014 - RFP No.: HSR13-57

250
240
230
220
210
200
190



PROFILE

"A88" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION		8	9	60	1	2	3	4	65	TOTAL
CY	Exc									
	Emb									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

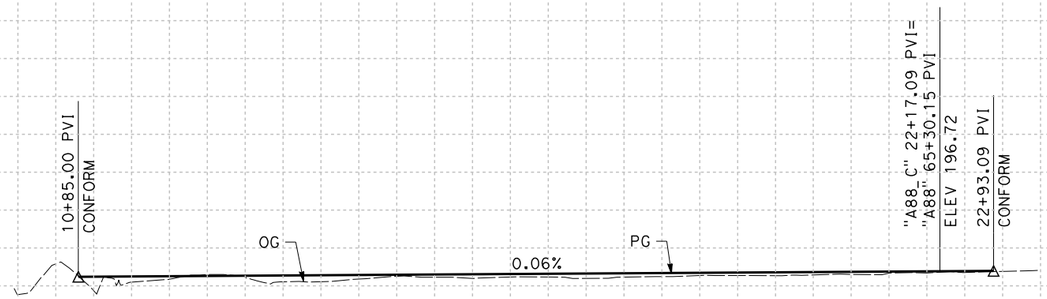
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 88

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2432
SCALE AS SHOWN
SHEET NO. 14 OF 16

NOTES:
1. SEE SHEET CT1431 FOR LAYOUT VIEW



PROFILE
"A88_C" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	TOTAL
CY Exc																	
CY Emb																	

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
California High-Speed Train

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
GRADE SEPARATION PROFILE
AVE 88 CONNECTOR

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2433
SCALE AS SHOWN
SHEET NO. 15 OF 16

04/02/2014 - RFP No.: HSR13-57

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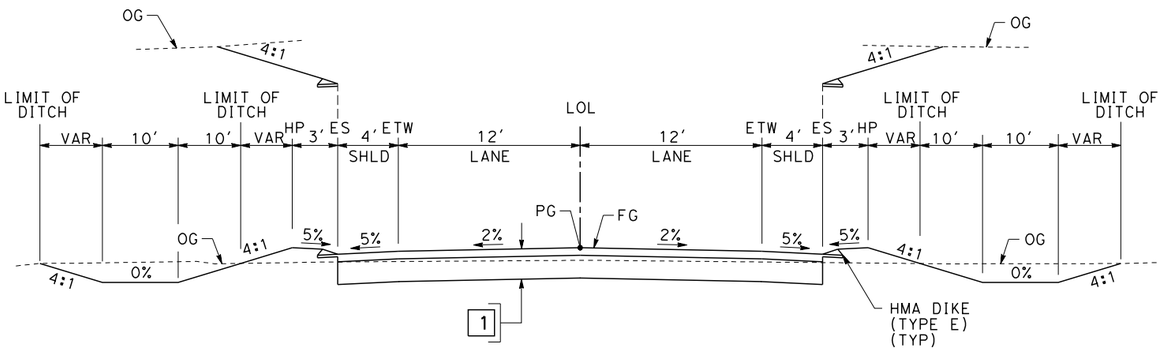
NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS

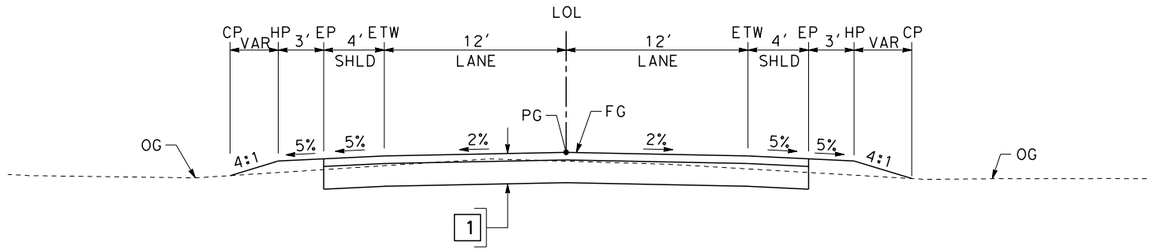
TYPICAL ROADWAY

1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB



SECTION A

"A128" 37+00.00 TO 48+37.00
"A128" 53+90.00 TO 64+50.00
"HA" 37+76.00 TO 48+80.00
"HA" 53+05.00 TO 63+60.00
"A112" 37+50.00 TO 48+80.00
"A112" 53+05.00 TO 63+85.00
"A88" 37+55.00 TO 48+50.00
"A88" 53+80.00 TO 64+60.00



SECTION B

"A128" 29+84.51 TO 37+00.00
"A128" 64+50.00 TO 71+01.17
"HA" 31+54.66 TO 37+76.00
"HA" 63+60.00 TO 71+55.12
"A112" 32+36.79 TO 37+50.00
"A112" 63+85.00 TO 71+48.16
"A112_C" 11+00.00 TO 16+71.14
"A88" 30+00.00 TO 37+55.00
"A88" 64+60.00 TO 65+30.15
"A88_C" 10+85.00 TO 22+93.09

TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA/JURISDICTION
AVE 128	A128	50(40*)	AASHTO/TULARE COUNTY
HESSE AVE	HA	50(45*)	AASHTO/TULARE COUNTY
AVE 112	A112	50(45*)	AASHTO/TULARE COUNTY
AVE 88	A88	50(40*)	AASHTO/TULARE COUNTY
AVE 112 CONNECTOR	A112_C	40	AASHTO/TULARE COUNTY
AVE 88 CONNECTOR	A88_C	40	AASHTO/TULARE COUNTY

* WILL REQUIRE REDUCED DESIGN SPEED AT HORIZONTAL CURVE PRIOR TO STOP CONDITION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY V. ORTEGA
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
ROADWAY/GRADE SEPARATION
TYPICAL CROSS SECTIONS

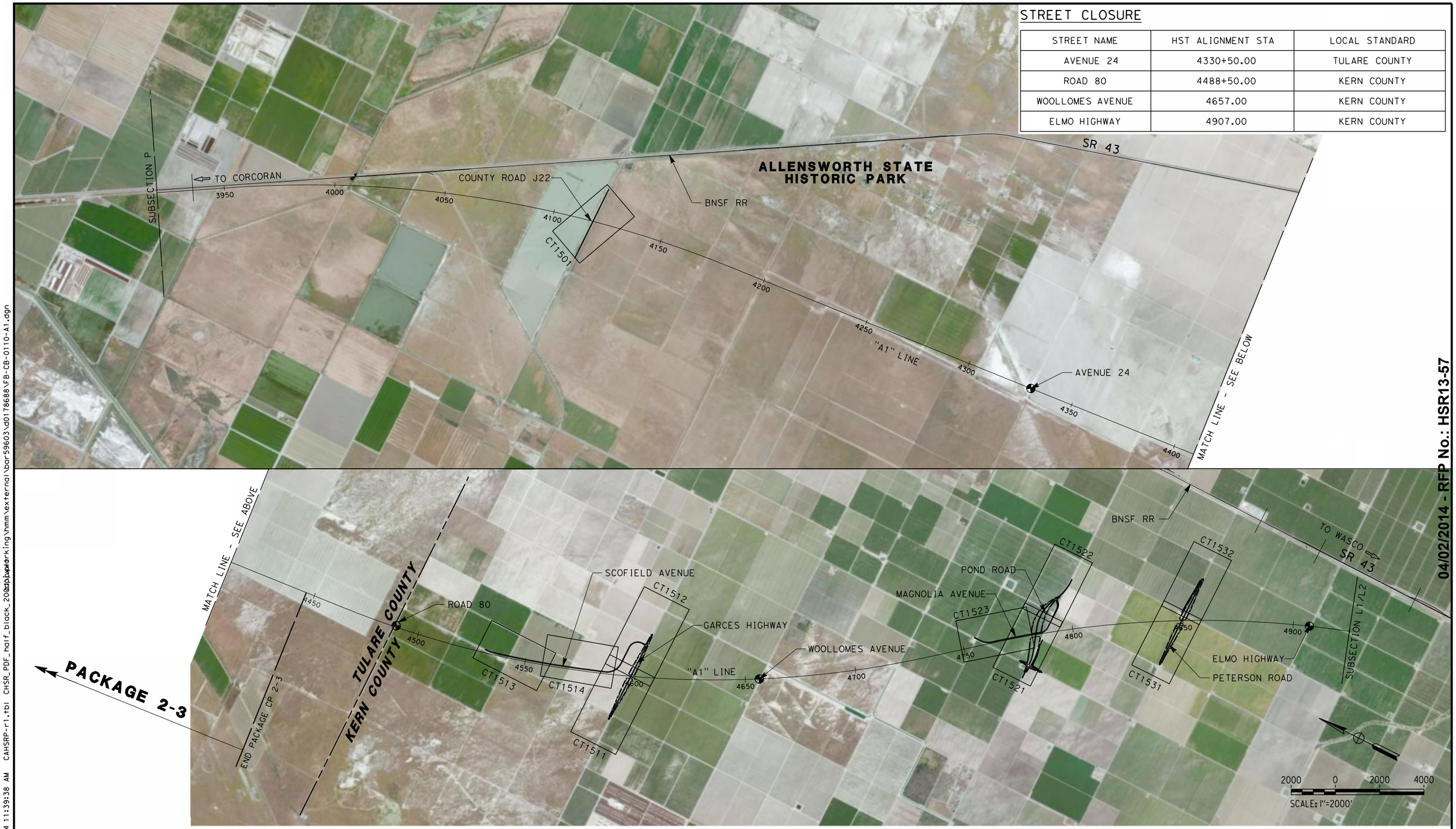
CONTRACT NO. HSR 06-0003
DRAWING NO. CT3060
SCALE AS SHOWN
SHEET NO. 16 OF 16

04/02/2014 - RFP No.: HSR13-57

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STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
AVENUE 24	4330+50.00	TULARE COUNTY
ROAD 80	4488+50.00	KERN COUNTY
WOOLLOMES AVENUE	4657.00	KERN COUNTY
ELMO HIGHWAY	4907.00	KERN COUNTY



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY P. BARBER
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
ROADWAY/GRADE SEPARATION
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0110
SCALE AS SHOWN
SHEET NO. 1 OF 24

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"J22" 64+50.00
CONFORM

"A1" LINE

4110+00

4115+00

4120+00

4125+00

4130+00

ROADWAY ROW

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

CANAL REALIGNMENT

HST ROW

"J22" 48+67.44 POT=
"A1" 4118+11.64 POC

EP

EB

MBGR (TYP)

BB

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

"J22" LINE

CANAL REALIGNMENT

ROADWAY ROW

COUNTY ROAD J22

DRAINAGE DITCH (TYP)

LIMIT OF DITCH

LIMIT OF DITCH
TOE OF FILL

ROADWAY ROW

"J22" 32+50.00
CONFORM

"J22" 30+00.00 PI

"J22" 65+00.00 PI

R=30'

ROADWAY ROW

HST ROW

ACCESS ROAD

LIMIT OF DITCH
TOE OF FILL

LIMIT OF DITCH

HST ROW

LINE DATA

NO.	BEARING	DISTANCE
1	N89°36'35"E	3500.00'

100 0 100 200
SCALE: 1"=100'

04/02/2014 - RFP No.: HSR13-57

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BAR50597

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY P. BARBER
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

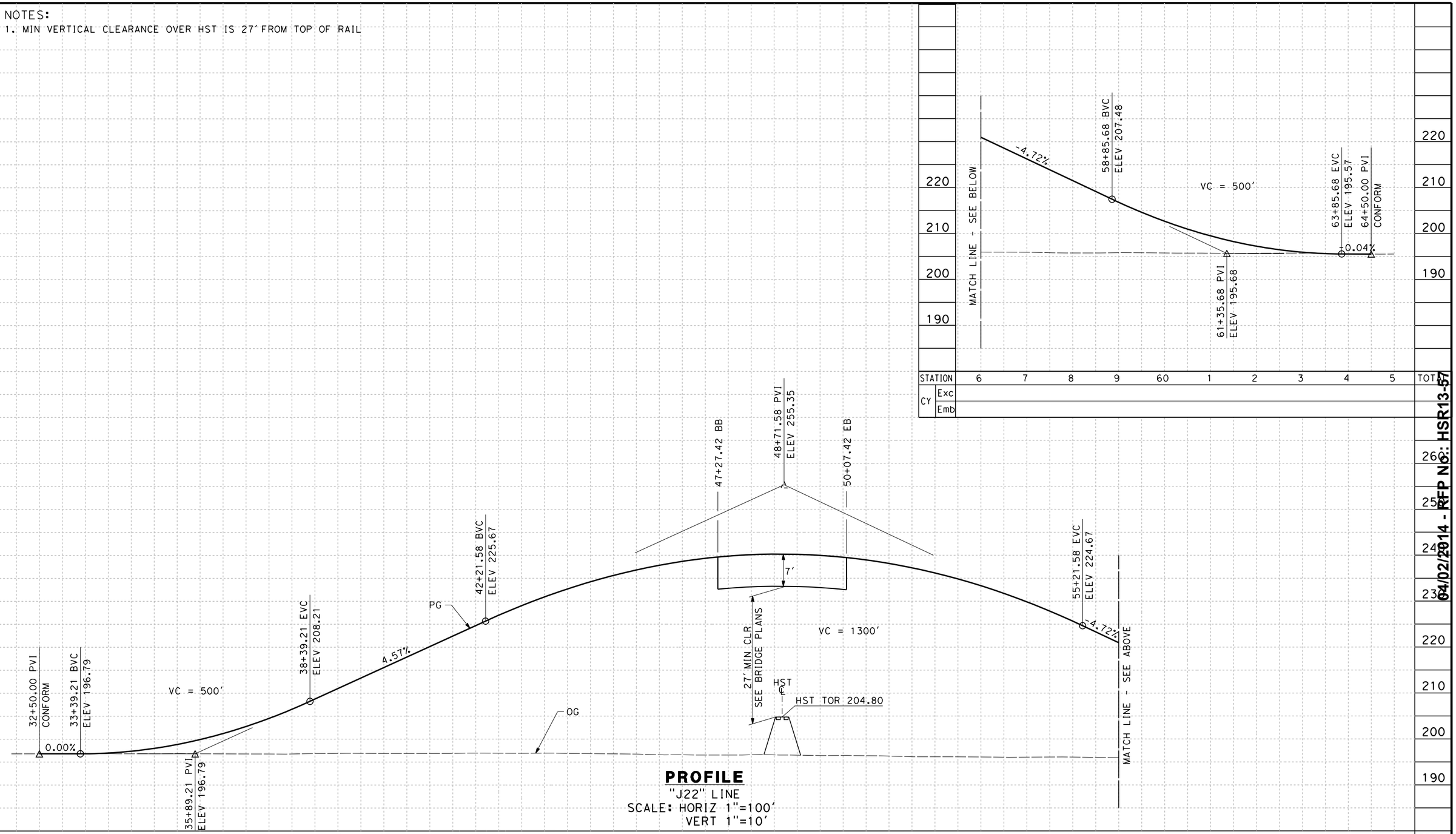
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
GRADE SEPARATION LAYOUT
COUNTY RD J22

CONTRACT NO. HSR 06-0003
DRAWING NO. CT1501
SCALE AS SHOWN
SHEET NO. 2 OF 24

NOTES:
1. MIN VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL



STATION	6	7	8	9	60	1	2	3	4	5	TOTAL
CY Exc											
CY Emb											

STATION	2	3	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	TOTAL
CY Exc																										
CY Emb																										

PROFILE
"J22" LINE
SCALE: HORIZ 1"=100'
VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY P. BARBER
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
GRADE SEPARATION PROFILE
COUNTY RD J22

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2501
SCALE AS SHOWN
SHEET NO. 12 OF 24

04/02/2014 - RFP No: HSR13-57

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BAR50597

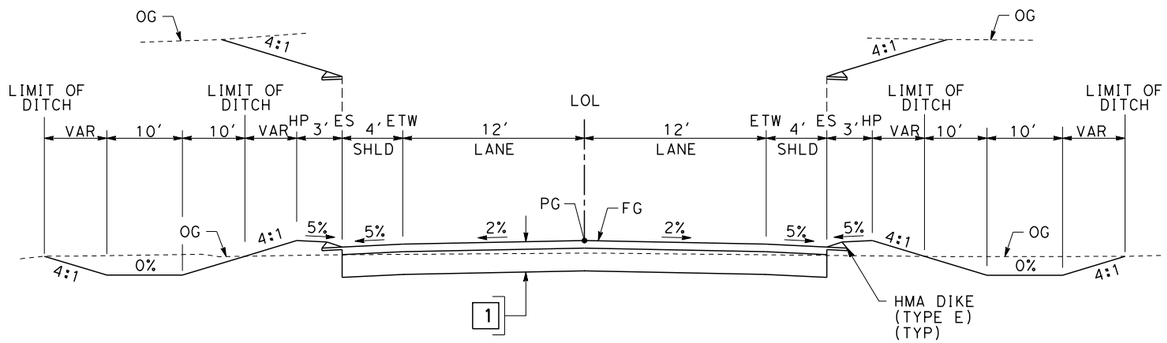
NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSIONS AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

STRUCTURAL SECTIONS

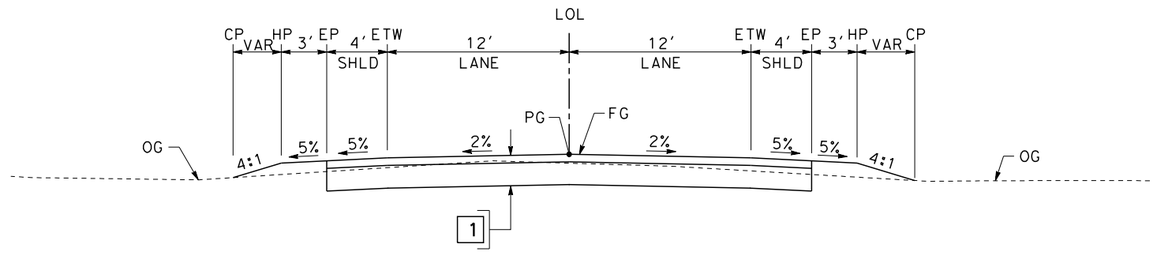
TYPICAL ROADWAY

1 — 0.30' HMA (TYPE A)
1.40' CL 2 AB



SECTION A

"J22" 33+00.00 TO 47+27.42
"J22" 50+07.42 TO 64+00.00
~~"GAR" 28+57.00 TO 48+59.88~~
~~"GAR" 51+39.88 TO 71+10.00~~
~~"PON" 16+50.00 TO 32+97.55~~
~~"PON" 35+97.55 TO 56+00.00~~
~~"PTR" 12+80.00 TO 32+73.57~~
~~"PTR" 35+73.57 TO 55+70.00~~



SECTION B

"J22" 32+50.00 TO 33+00.00
"J22" 64+00.00 TO 64+50.00
~~"GAR" 28+07.98 TO 28+57.00~~
~~"GAR" 71+10.00 TO 71+57.42~~
~~"SCO" 11+00.00 TO 92+20.94~~
~~"PON" 13+85.00 TO 16+50.00~~
~~"PON" 56+00.00 TO 60+40.00~~
~~"MAG" 10+00.00 TO 59+24.78~~
~~"MAG1" 18+30.00 TO 30+00.00~~
~~"PTR" 12+30.00 TO 12+80.00~~
~~"PTR" 55+70.00 TO 56+19.94~~

TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA / JURISDICTION
COUNTY RD J22	J22	50	AASHTO/TULARE COUNTY
~~GARCES HWY~~	~~GAR~~	~~65~~	~~KERN COUNTY/KERN COUNTY~~
~~SCOFIELD AVE~~	~~SCO~~	~~45(35*)~~	~~KERN COUNTY/KERN COUNTY~~
~~POND RD~~	~~PON~~	~~65~~	~~KERN COUNTY/KERN COUNTY~~
~~MAGNOLIA AVE~~	~~MAG~~	~~45(35*)~~	~~KERN COUNTY/KERN COUNTY~~
~~MAGNOLIA AVE(SOUTH)~~	~~MAG1~~	~~45~~	~~KERN COUNTY/KERN COUNTY~~
~~PETERSON RD~~	~~PTR~~	~~65~~	~~KERN COUNTY/KERN COUNTY~~

~~* WILL REQUIRE REDUCED DESIGN SPEED AT HORIZONTAL CURVE PRIOR TO STOP CONDITION.~~

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY I. JOSIFEK
DRAWN BY P. BARBER
CHECKED BY T. CLIFFORD
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
ROADWAY/GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3070
SCALE AS SHOWN
SHEET NO. 24 OF 24

04/02/2014 - RFP No.: HSR13-57

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CALIFORNIA HIGH-SPEED TRAIN

Roadway Structure Plans



RECORD SET 15% DESIGN SUBMISSION

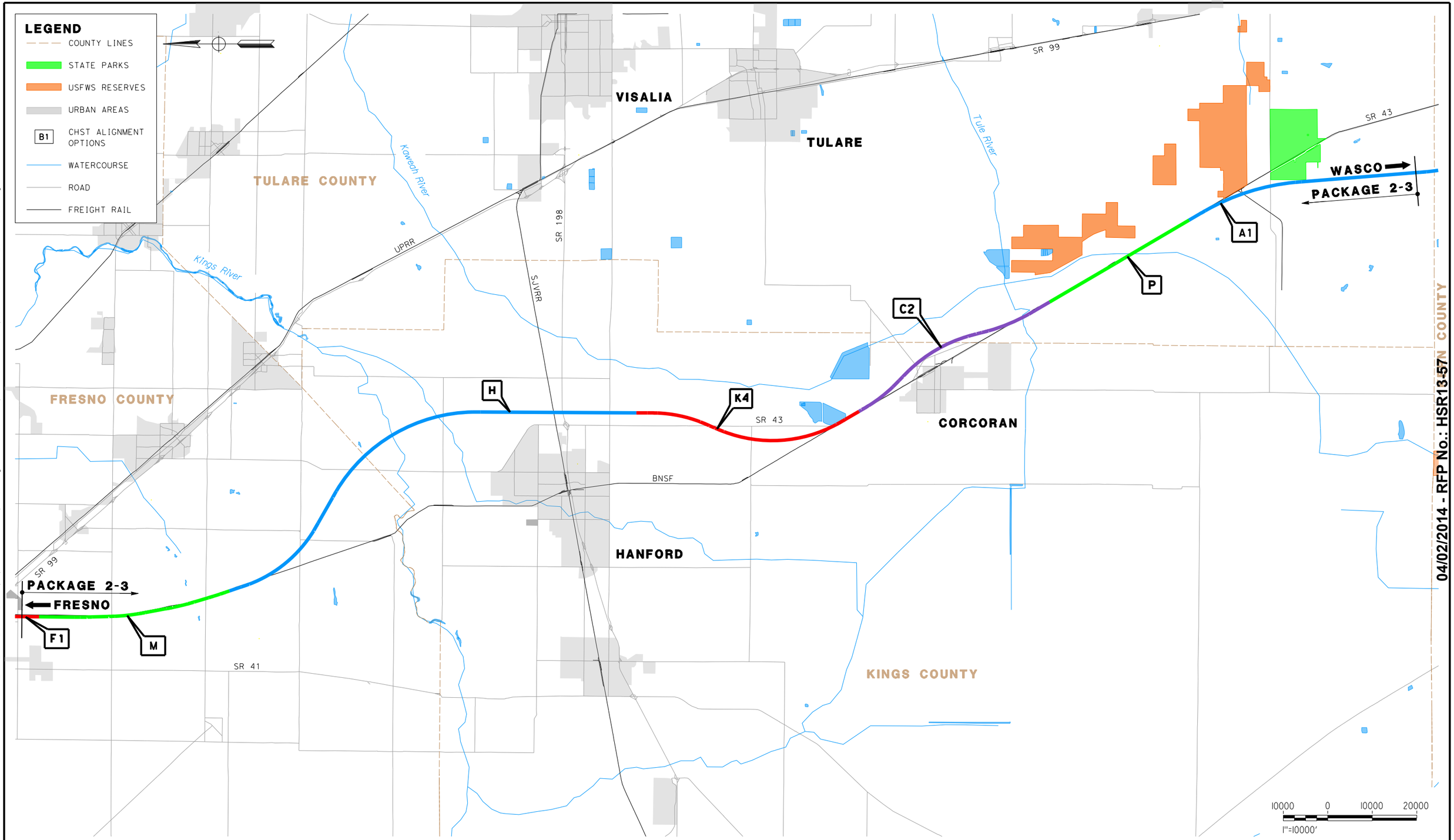
Fresno to Bakersfield

Overhead Planning Studies

December 2013

CALIFORNIA High-Speed Rail Authority

04/02/2014 - RFP No.: HSR13-57



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 02/04/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PACKAGE 2-3
ALIGNMENT
LOCATION MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. TT-B0001
SCALE AS SHOWN
SHEET NO. 1 OF 4

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GENERAL SHEETS

DRAWING No	DRAWING DESCRIPTION	SHEET No
TT-B0001	ALIGNMENT - LOCATION MAP	1 OF 4
GE-A0026	ROADWAY STRUCTURES - INDEX OF SHEETS	2 OF 4
CB0010	GENERAL - ABBREVIATIONS & LEGENDS	3 OF 4
CB0011	GENERAL - ABBREVIATIONS & LEGENDS	4 OF 4

ALIGNMENT M - MONMOUTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0049	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 9
ST2101	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E LINCOLN AVE	2 OF 9
ST2103	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E ADAMS AVE	3 OF 9
ST2104	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E SOUTH AVE	4 OF 9
ST2106	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E MANNING AVE	5 OF 9
ST2107	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E MANNING AVE	6 OF 9
ST2109	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E FLORAL AVE	7 OF 9
ST2111	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E NEBRASKA AVE	8 OF 9
ST2113	MONMOUTH SUBSECTION - ALIGNMENT M - OVERHEAD PLANNING STUDY - E MOUNTAIN VIEW AVE	9 OF 9

ALIGNMENT H - HANFORD SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0050	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 14
ST2117	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - S CLOVIS AVE	2 OF 14
ST2119	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - E ELKHORN AVE	3 OF 14
ST2121	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - S FOWLER AVE	4 OF 14
ST2123	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - E DAVIS AVE	5 OF 14
ST2129	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - DOVER AVE	6 OF 14
ST2133	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - EXCELSIOR AVE	7 OF 14
ST2135	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - ELDER AVE	8 OF 14
ST2137	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - FLINT AVE	9 OF 14
ST2139	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - FARGO AVE	10 OF 14
ST2143	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - HANFORD ARMONA RD	11 OF 14
ST2145	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - HOUSTON AVE	12 OF 14
ST2146	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - HOUSTON AVE	13 OF 14
ST2147	HANFORD SUBSECTION - ALIGNMENT H - OVERHEAD PLANNING STUDY - IONA AVE	14 OF 14

ALIGNMENT K4 - KAWEAH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0065	KAWEAH SUBSECTION - ALIGNMENT K4 - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 5
ST2200	KAWEAH SUBSECTION - ALIGNMENT K4 - OVERHEAD PLANNING STUDY - IDAHO AVE	2 OF 5
ST2222	KAWEAH SUBSECTION - ALIGNMENT K4 - OVERHEAD PLANNING STUDY - JACKSON AVE	3 OF 5
ST2226	KAWEAH SUBSECTION - ALIGNMENT K4 - OVERHEAD PLANNING STUDY - KENT AVE	4 OF 5
ST2228	KAWEAH SUBSECTION - ALIGNMENT K4 - OVERHEAD PLANNING STUDY - KANSAS AVE	5 OF 5

ALIGNMENT C2 - CORCORAN SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0075	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 3
ST2239	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - OVERHEAD PLANNING STUDY - NEVADA AVE	2 OF 3
ST2244	CORCORAN BYPASS SUBSECTION - ALIGNMENT C2 - OVERHEAD PLANNING STUDY - CORCORAN HWY	3 OF 3

ALIGNMENT P - PIXLEY SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0090	PIXLEY SUBSECTION - ALIGNMENT P - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 5
ST2401	PIXLEY SUBSECTION - ALIGNMENT P - OVERHEAD PLANNING STUDY - AVE 128	2 OF 5
ST2411	PIXLEY SUBSECTION - ALIGNMENT P - OVERHEAD PLANNING STUDY - HESSE AVE	3 OF 5
ST2421	PIXLEY SUBSECTION - ALIGNMENT P - OVERHEAD PLANNING STUDY - AVE 112	4 OF 5
ST2431	PIXLEY SUBSECTION - ALIGNMENT P - OVERHEAD PLANNING STUDY - AVE 88	5 OF 5

ALIGNMENT A1 - ALLENSWORTH SUBSECTION

DRAWING No	DRAWING DESCRIPTION	SHEET No
SB0100	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - OVERHEAD PLANNING STUDY - KEY MAP	1 OF 5
ST2501	ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - OVERHEAD PLANNING STUDY - COUNTY RD J22	2 OF 5
~~ST2511~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - OVERHEAD PLANNING STUDY - GARCES HWY~~	~~3 OF 5~~
~~ST2521~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - OVERHEAD PLANNING STUDY - POND RD~~	~~4 OF 5~~
~~ST2531~~	~~ALLENSWORTH BYPASS SUBSECTION - ALIGNMENT A1 - OVERHEAD PLANNING STUDY - PETERSON RD~~	~~5 OF 5~~

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. TONKIN
DRAWN BY J. VALENZUELA
CHECKED BY K. SEYMOUR
IN CHARGE R. COFFIN
DATE 02/04/14

PROPOSED PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ROADWAY STRUCTURES
INDEX OF SHEETS
SHEET 1 OF 1

CONTRACT NO. HSR 06-0003
DRAWING NO. GE-A0026
SCALE NO SCALE
SHEET NO. 2 OF 4

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A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BNSF	BURLINGTON NORTH & SANTA FE
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CLEARANCE POINT
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD
CULV	CULVERT
℄	CENTERLINE

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXWY	EXPRESSWAY
EXT	EXTERIOR

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY
FPLM	FULL SPAN PRECAST LAUNCHING METHOD

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HR	HOUR
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HS	HIGH STRENGTH
HST	HIGH SPEED TRAIN
HSR	HIGH SPEED RAIL
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LCB	LEAN CONCRETE BASE
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LC	LENGTH OF CURVE
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL
MSS	MOVING SCAFFOLDING SYSTEM

N

N	NORTH, NORTHING
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE
N/A	NOT APPLICABLE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
℄,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

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RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 1 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0010
SCALE NO SCALE
SHEET NO. 3 OF 4

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P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
R/W, ROW	RIGHT OF WAY
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
S	STATION LINE
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES
SJVR	SAN JOAQUIN VALLEY RAILROAD

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TM	TECHNICAL MEMORANDUM
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
TS	TRAFFIC SIGNAL, TUBULAR STEEL, TANGET TO SPIRAL
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

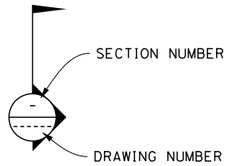
X

X SEC	CROSS SECTION
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

LEGEND



-E- PROPOSED ELECTRICITY LINE

-e- EXISTING ELECTRICITY LINE

-e-(oh)- EXISTING OVERHEAD ELECTRICITY LINE

-E-(OH)- PROPOSED OVERHEAD ELECTRICTY LINE

PROPOSED HST RIGHT OF WAY

PROPOSED HST TRACK CENTERLINE

RETAINING WALL

TOE OF SLOPE / TOP OF CUT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

OR

TRACK (PLAN AND ELEVATION)

REL

TRACK TO BE REMOVED AND RELOCATED PER BNSF

REMOVE BASE & SURFACING

SOUND BARRIER (POTENTIAL)

DIRECTION OF FLOW

WATER SURFACE

GENERAL NOTES

1. TRACK PROFILE IS DESIGNED AS TOP OF THE LOW RAIL. VERTICAL CLEARANCE REQUIREMENTS ARE MEASURED FROM THE TOP OF THE HIGH RAIL ON SUPERELEVATED TRACK. THE CLEARANCE ENVELOPES SHOWN DEMONSTRATE THE MINIMUM CLEARANCE REQUIREMENTS.

2. MINIMUM VERTICAL CLEARANCE REQUIREMENTS TO CANALS AND DITCHES ARE NOT KNOWN. FURTHER CONSULTATION WITH THE WATERCOURSE OWNERS WILL BE REQUIRED TO DETERMINE NECESSARY CLEARANCES.

3. THE FOLLOWING ARE ROADWAY DESIGN STANDARDS AND GUIDELINES:
   A. CALTRANS HIGHWAY DESIGN MANUAL (2012)
   B. AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2011)
   C. AASHTO ROADSIDE DESIGN GUIDE (2011)
   D. APPLICABLE LOCAL DESIGN STANDARD AND GUIDELINES (I.E., CITY OF FRESNO)

4. THE FEMA FLOODPLAIN BOUNDARIES ARE CALLED OUT AS "LIMIT OF 100YR FEMA FLOODPLAIN". THE LIMITS OF THE MODELED 100 YEAR WATER SURFACE ELEVATIONS (WSE) ARE APPROXIMATE AND ARE MARKED WITH THE NAME OF THE WATERBODY ASSOCIATED WITH THE MODELED FLOODING, E.G. "LIMIT OF POSO CREEK FLOODPLAIN".

5. THE STRUCTURE DESIGN ASSUMES THAT THE DEPTH FROM TOR TO TOP OF DECK IS 2'-6" THROUGHOUT. HOWEVER, WHERE BALLASTED TRACK FORM IS USED, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-9" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE, AND PROTECTION LAYER IF REQUIRED. FOR SLAB TRACKFORM, THE HEIGHT FROM TOR TO DECK SHALL BE 2'-6" PLUS AN ALLOWANCE FOR WATERPROOF MEMBRANE AND PROTECTION LAYER IF REQUIRED.

6. WHERE THE VERTICAL ALIGNMENT GRADE IS LESS THAN 0.5% THE UPPER SURFACE OF THE VIADUCT STRUCTURE SHALL BE PROFILED TO GIVE A MINIMUM LONGITUDINAL FALL OF 0.5%. TYPICALLY FOR A SPAN OF 120'-00" ON A 0% GRADE SECTION OF VIADUCT THIS COULD BE ACHIEVED BY MODIFYING THE CROSS SLOPE OF THE GIRDER LINEARLY BETWEEN 0.8% AT MID-SPAN TO 2% AT EACH END.

7. WHEN LATERAL SEPARATION BETWEEN THE CONVENTIONAL RAILROAD AND HST SYSTEM IS LESS THAN 102', A SITE SPECIFIC HAZARD ANALYSIS WILL BE CONDUCTED TO DETERMINE WHAT SPECIFIC COLLISION PROTECTION MEASURES MAY NEED TO BE IMPLEMENTED.

8. RIP-RAP PROTECTION IS REQUIRED FOR EMBANKMENTS WITHIN FEMA SPECIAL FLOOD HAZARD ZONES, IN ACCORDANCE WITH DESIGN CRITERIA.

9. HST ALIGNMENT CONTROL LINE IS DESIGNED AS THE CENTERLINE BETWEEN THE TWO MAINLINE TRACKS.

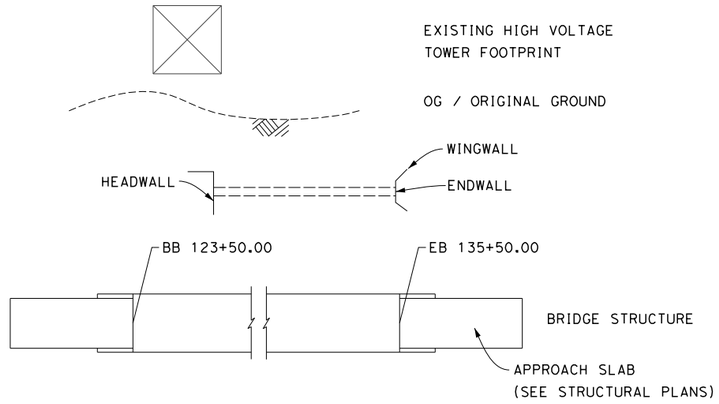
10. TRACK FORM USED IN TYPICAL SECTIONS IS INDICATIVE.

DIRECTION OF TRAFFIC

POINT OF MINIMUM VERTICAL CLEARANCE
ROAD CLOSURE (ROADWAYS)

1 LINE DATA

1 3 CURVE DATA (ALIGNMENTS)
CURVE DATA (STRUCTURES)



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GENERAL
ABBREVIATIONS AND LEGENDS
SHEET 2 OF 2

CONTRACT NO. HSR 06-0003
DRAWING NO. CB0011
SCALE NO SCALE
SHEET NO. 4 OF 4

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E LINCOLN AVE

ALIGNMENT F1

ST2101

650

E ADAMS AVE

ST2103

700

E SOUTH AVE

ST2104

750

E MANNING AVE

ST2107

800

ST2106

"M" LINE

850

E FLORAL AVE

ST2109

900

BNSF

E NEBRASKA AVE

ST2111

950

E MOUNTAIN VIEW AVE

ST2113

1000

1050

ALIGNMENT H, HW & HW2

E CONEJO AVE

BOWLES

MONMOUTH

SR 43

SR 41

S FOWLER AVE

S CLOVIS AVE

S CEDAR AVE

LEGEND

EXISTING FREIGHT RAILROAD

PROPOSED CHST

2000 0 2000 4000

1"=2000'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

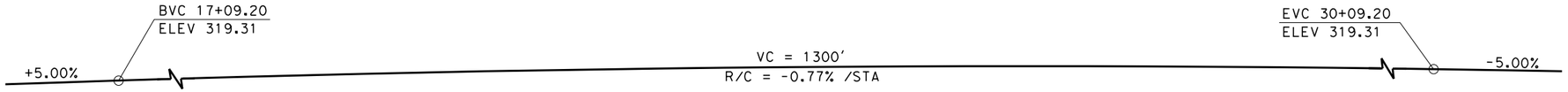
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
KEY MAP

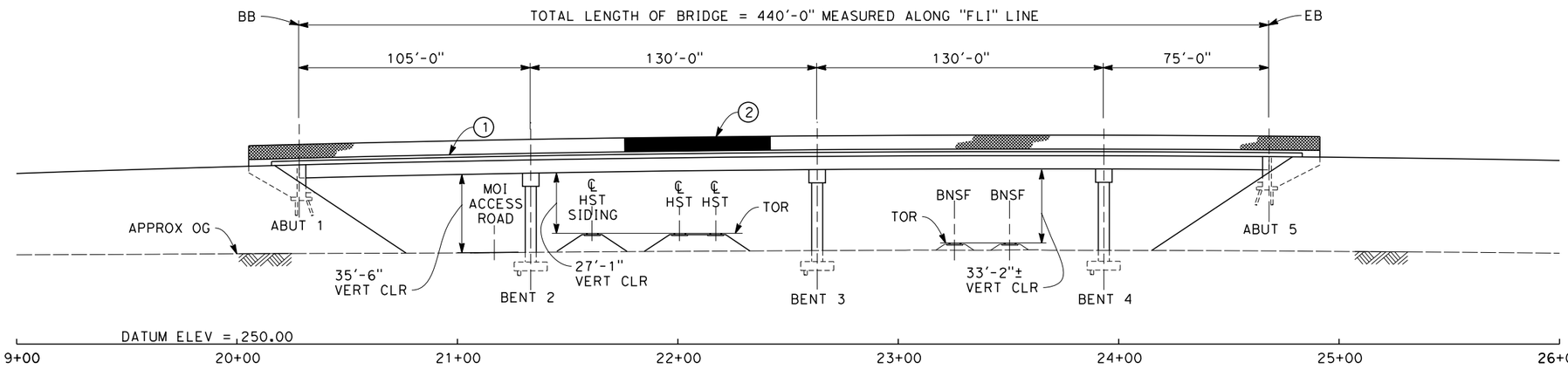
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DRAWING NO. SB0049
SCALE AS SHOWN
SHEET NO. 1 OF 9

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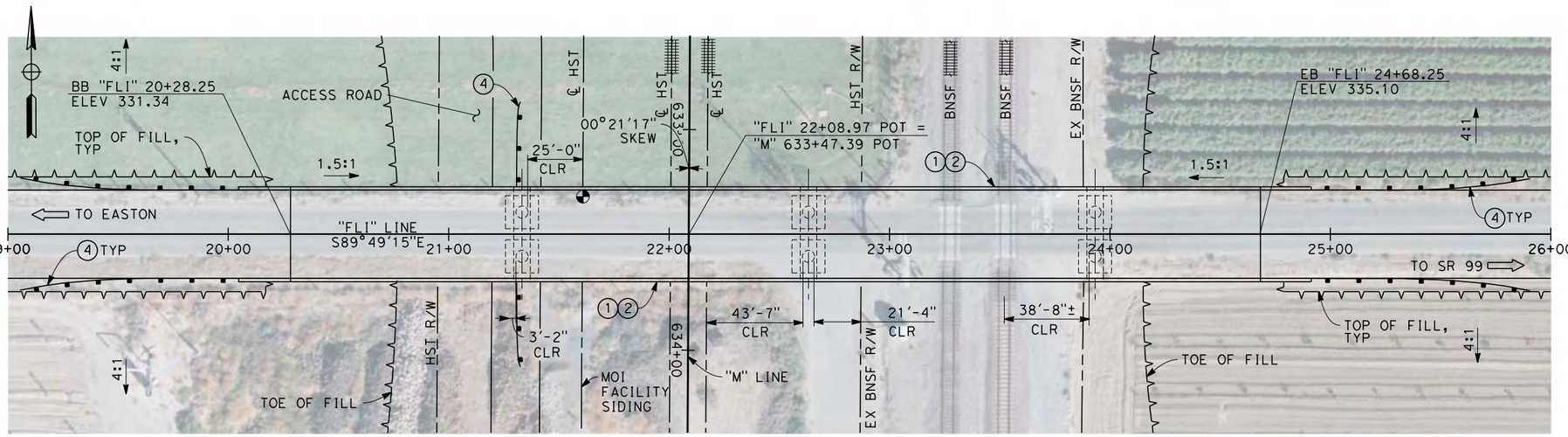
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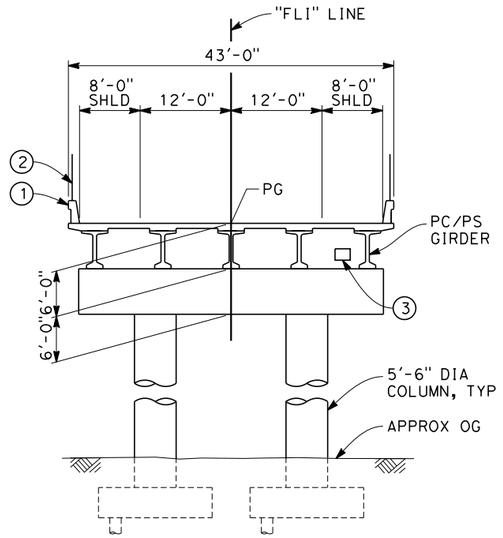
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

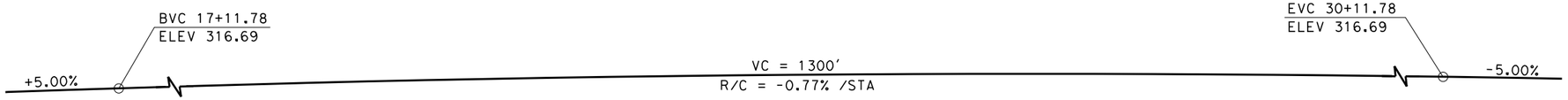
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URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

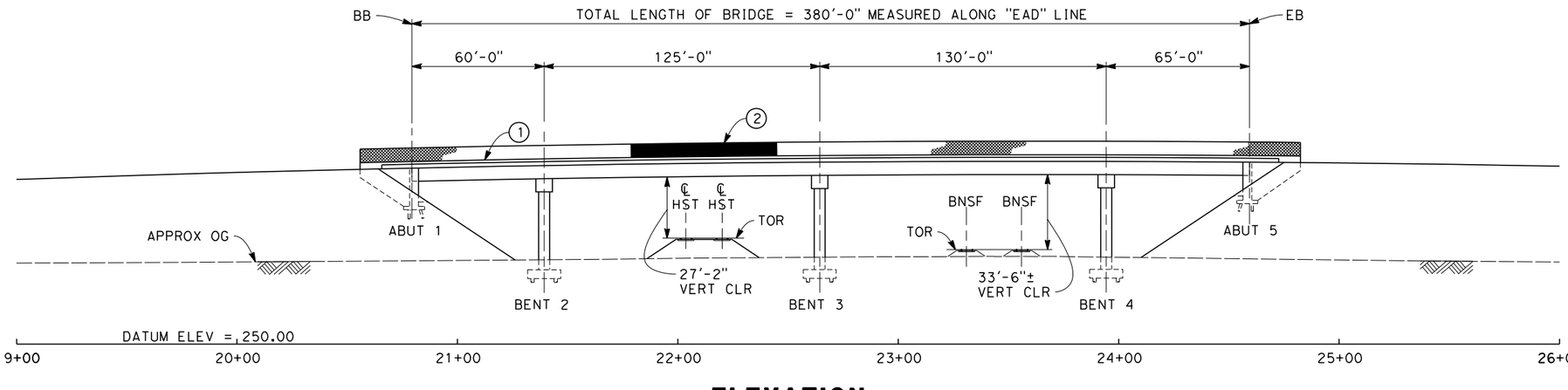
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E LINCOLN AVE

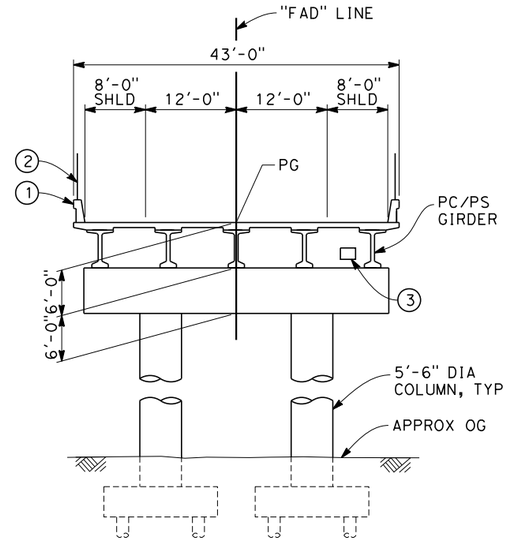
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DRAWING NO. ST2101
SCALE AS SHOWN
SHEET NO. 2 OF 9



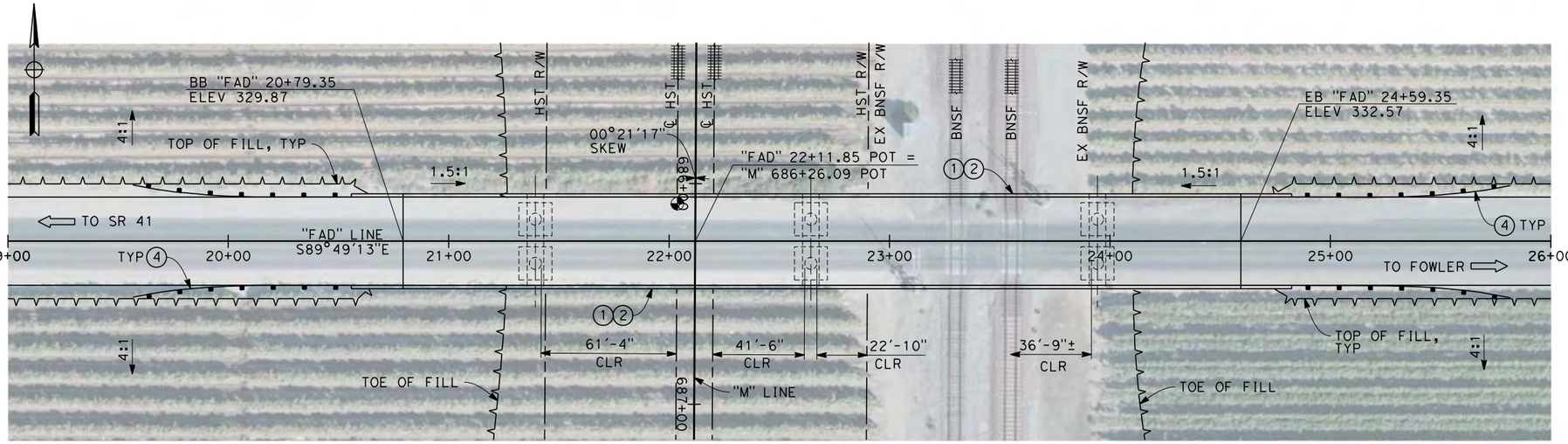
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

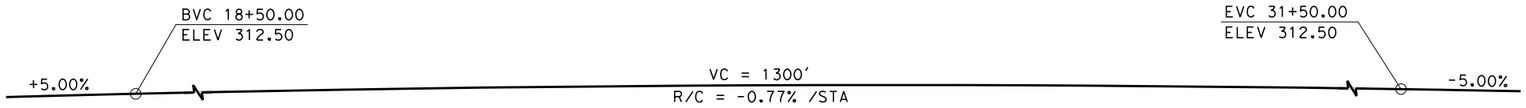
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URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

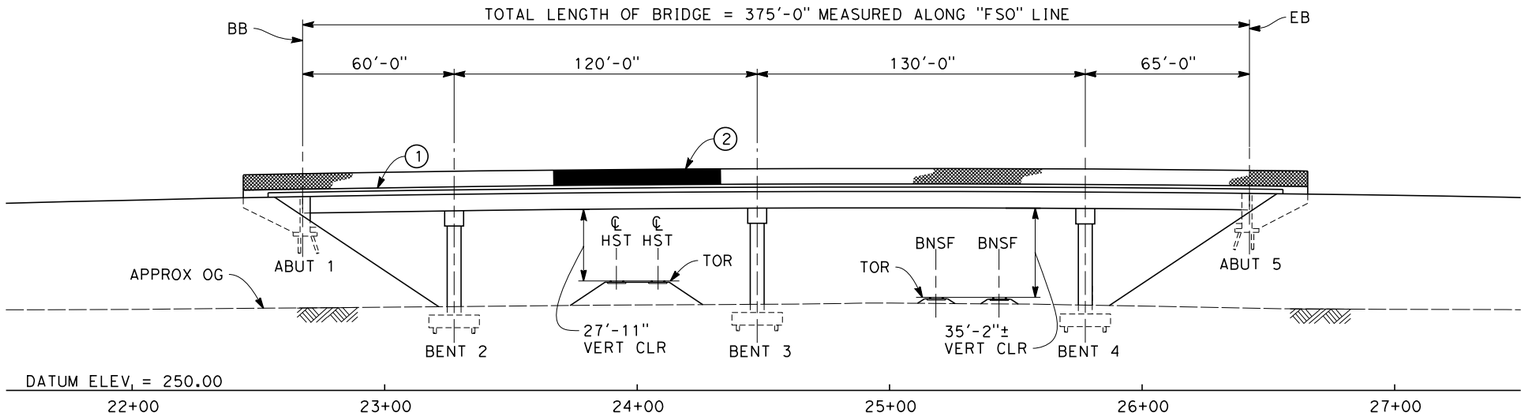
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E ADAMS AVE

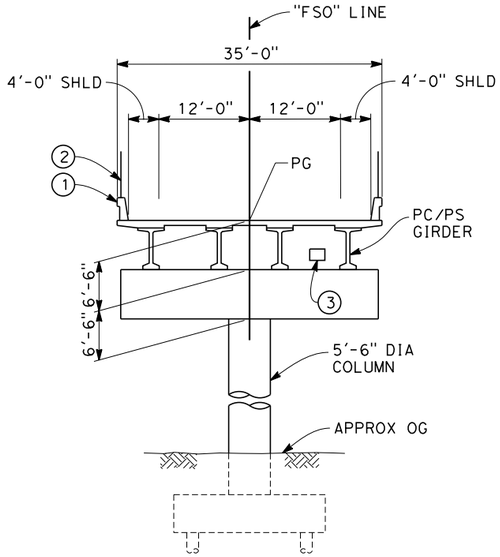
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2103
SCALE AS SHOWN
SHEET NO. 3 OF 9



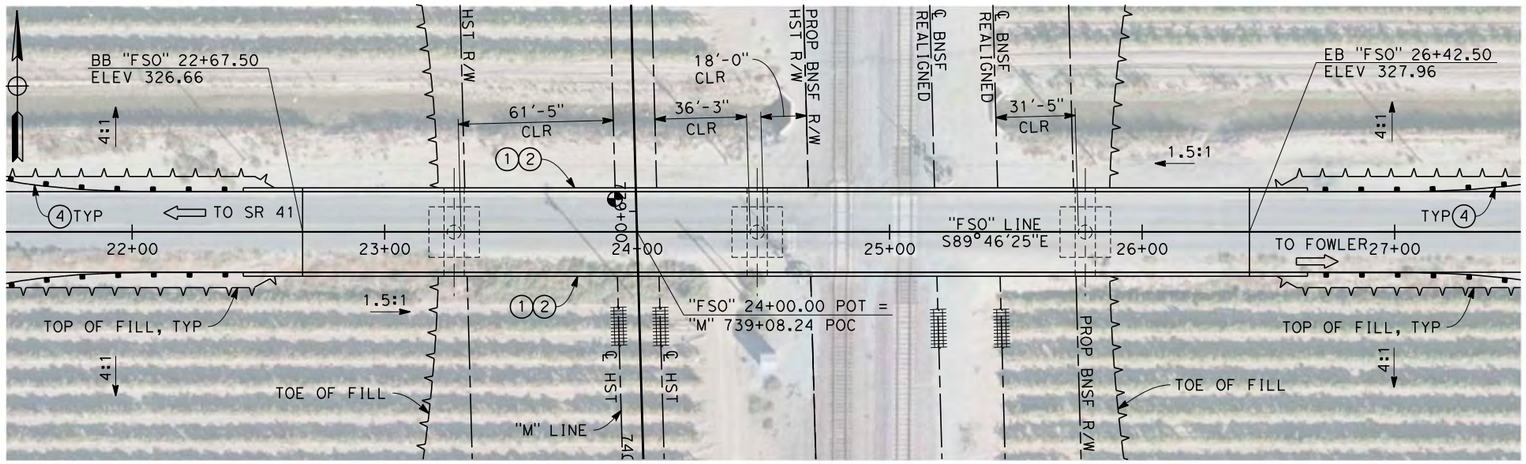
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY T. PRETZER
CHECKED BY B. LUSCOMBE
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

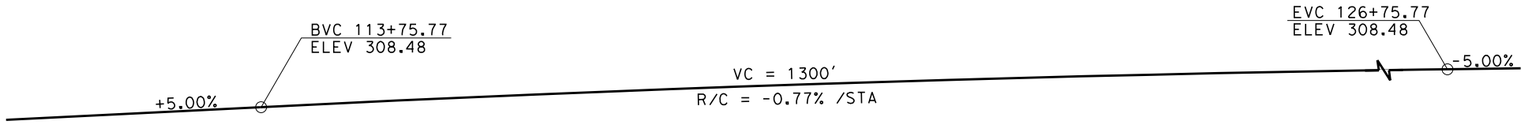
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E SOUTH AVE

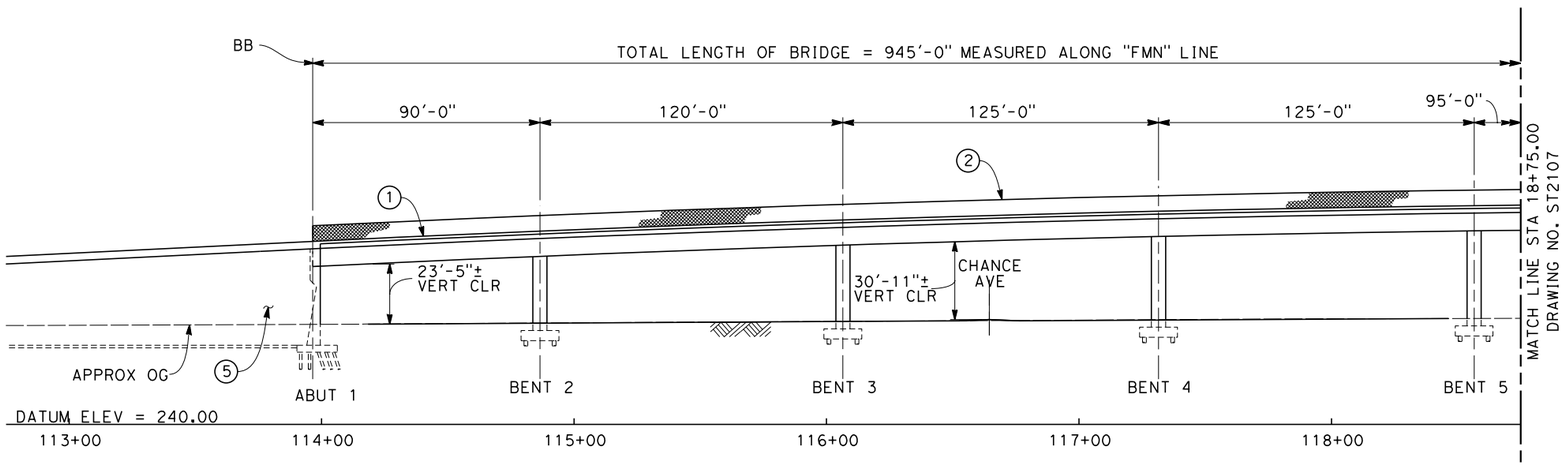
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SHEET NO. 4 OF 9

04/02/2014 - RFP No.: HSR13-57

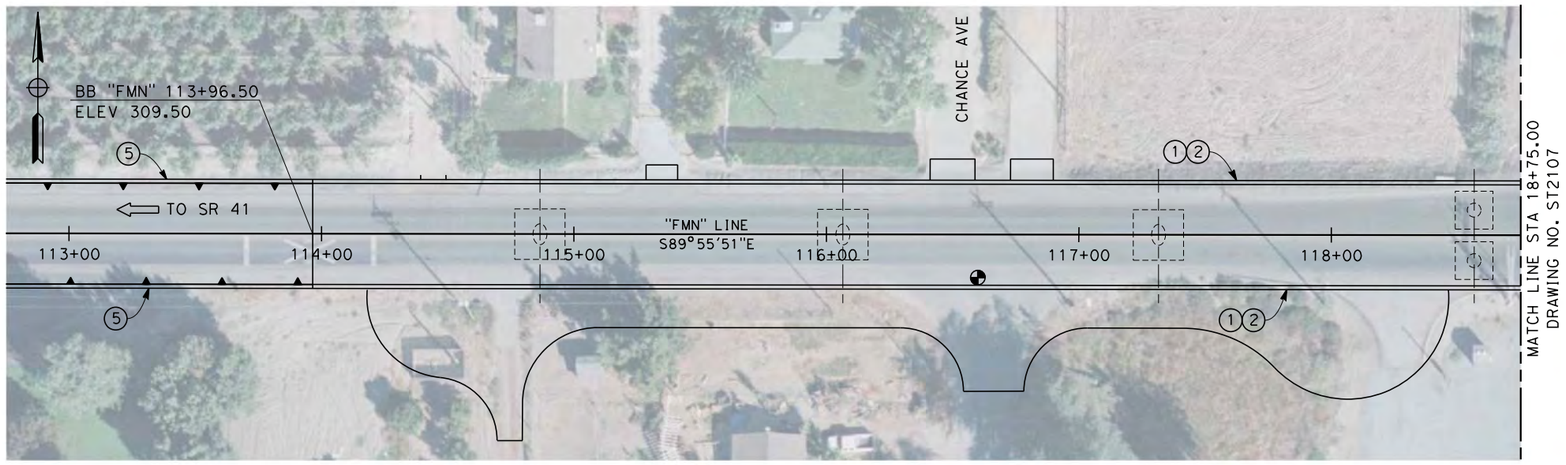
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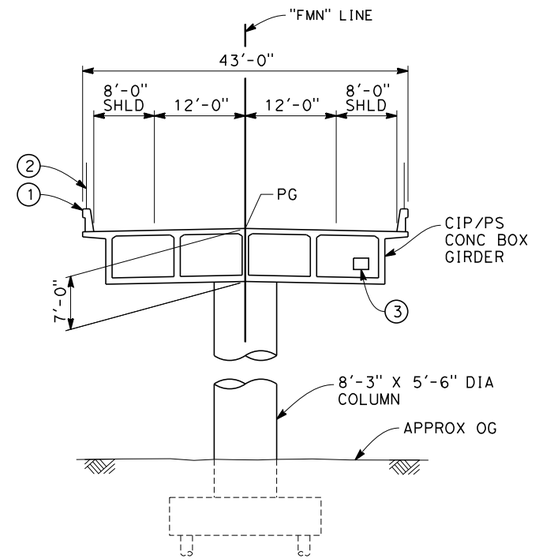
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



(BENT 2 - 4)

TYPICAL SECTION
SCALE: 1"=10'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR
(5) RETAINING WALL WITH BARRIER

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

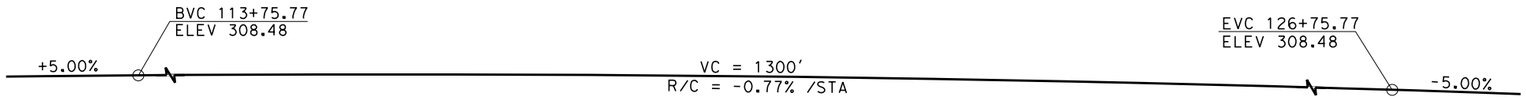
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E MANNING AVE

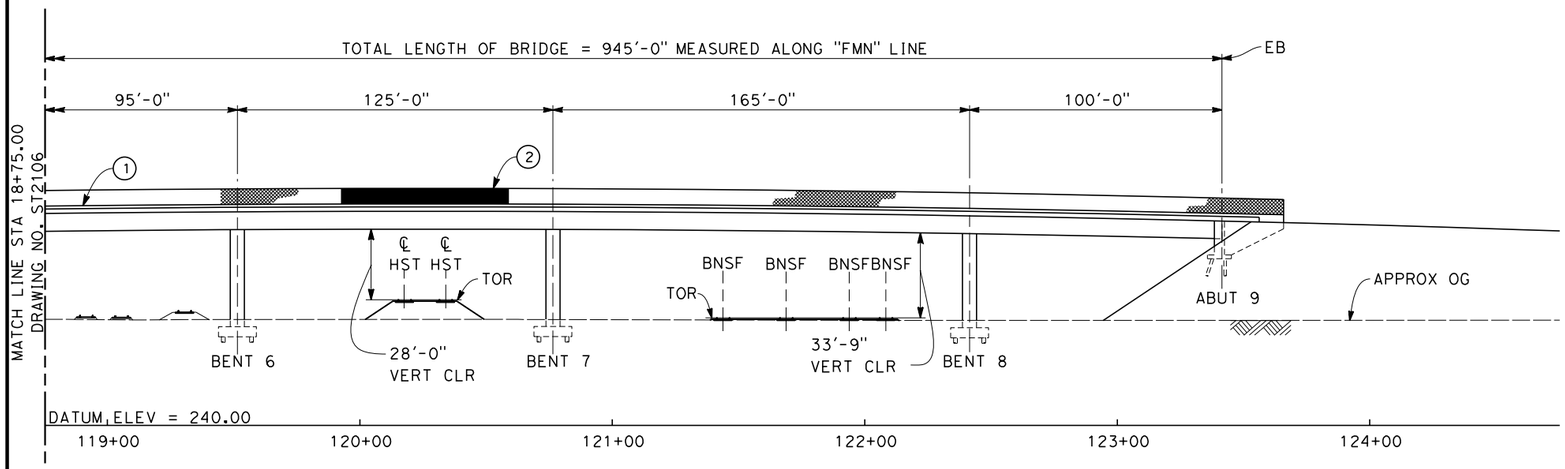
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SHEET NO. 5 OF 9

04/02/2014 - RFP No.: HSR13-57

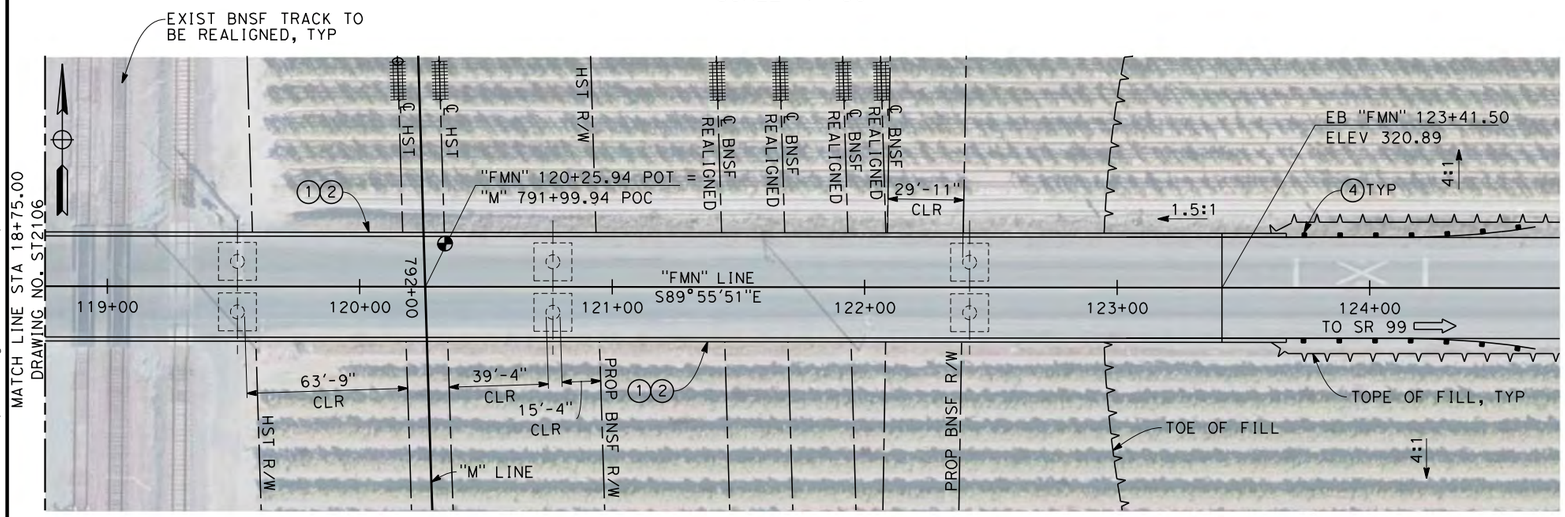
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PRE45072



PROFILE GRADE
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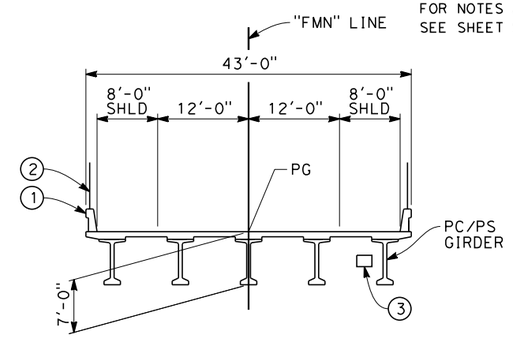


ELEVATION
SCALE: 1"=30'

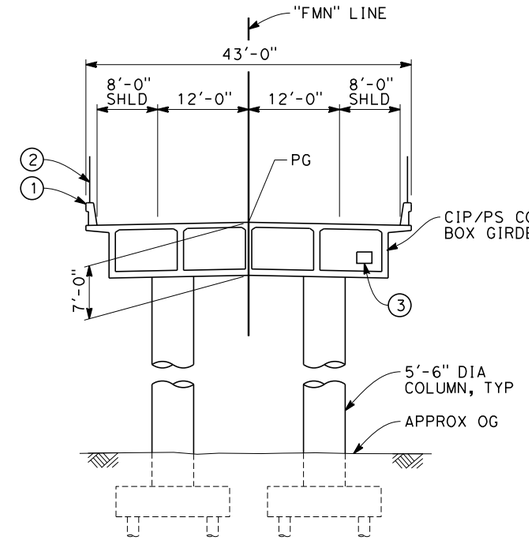


PLAN
SCALE: 1"=30'

NOTE:
FOR NOTES AND LEGEND
SEE SHEET ST2106



SECTION OVER BNSF



(BENT 5 - 8)

TYPICAL SECTION
SCALE: 1"=10'

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

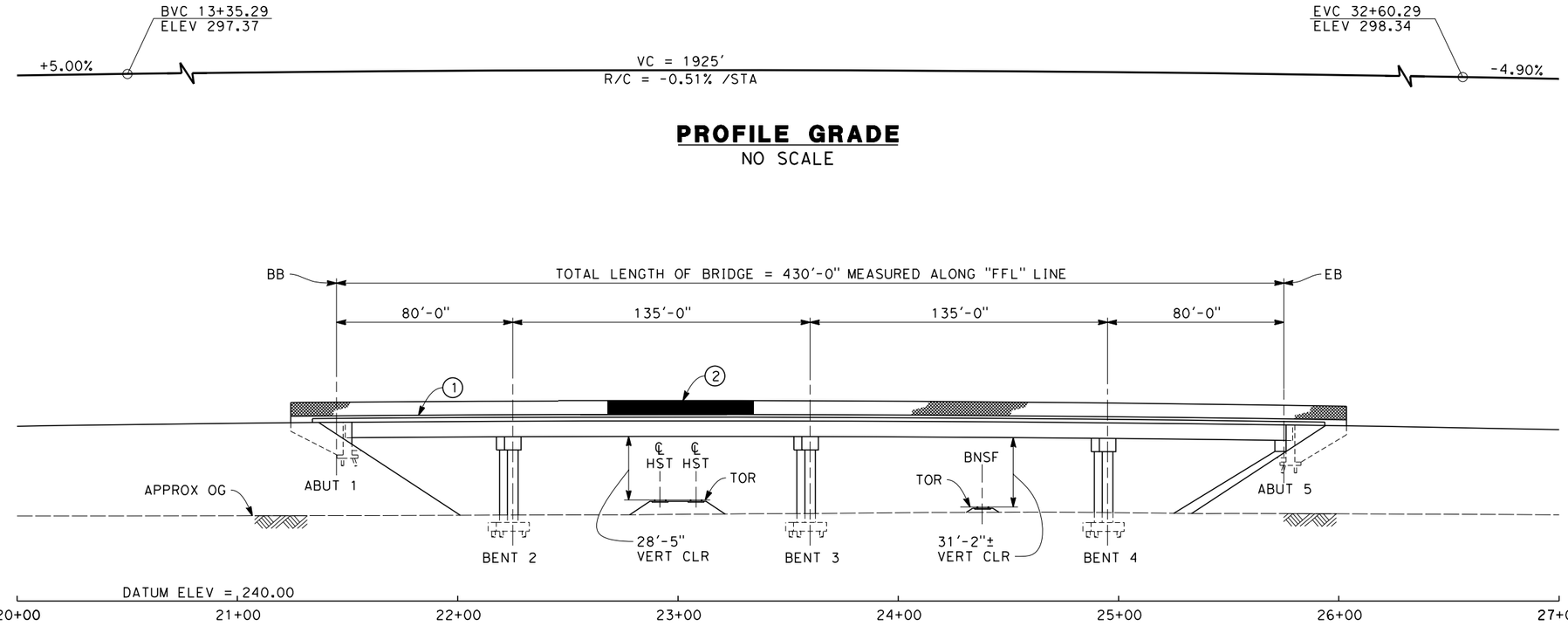
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E MANNING AVE

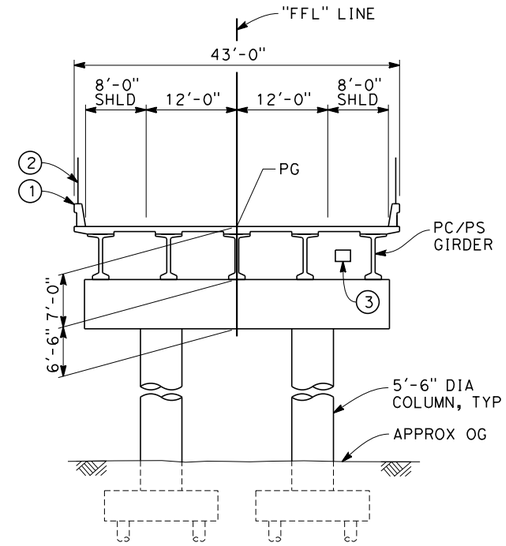
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DRAWING NO. ST2107
SCALE AS SHOWN
SHEET NO. 6 OF 9

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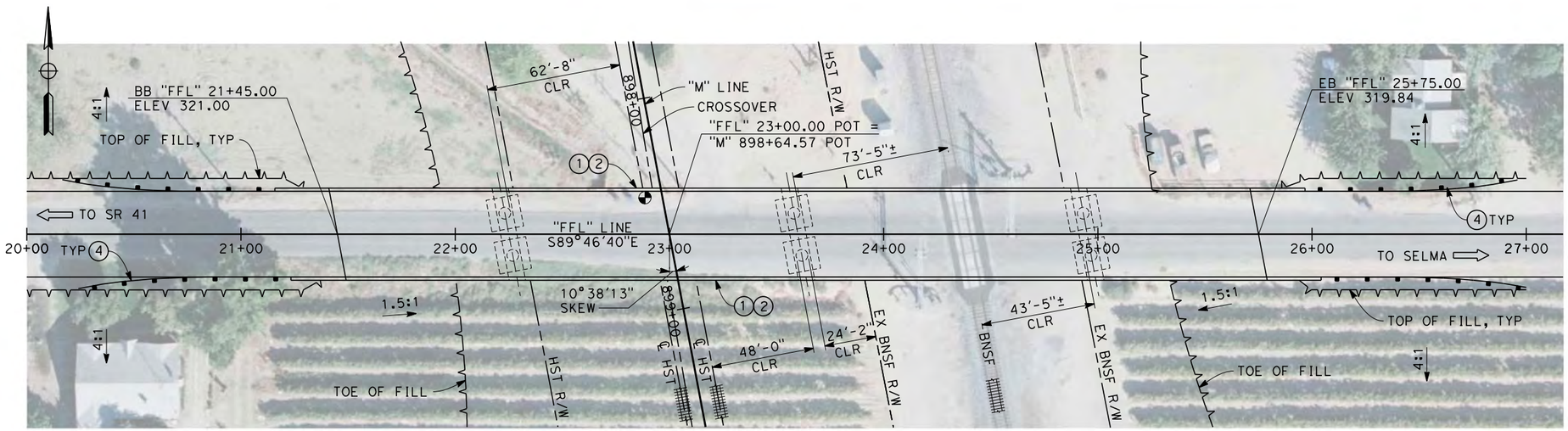


PROFILE GRADE
NO SCALE

ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

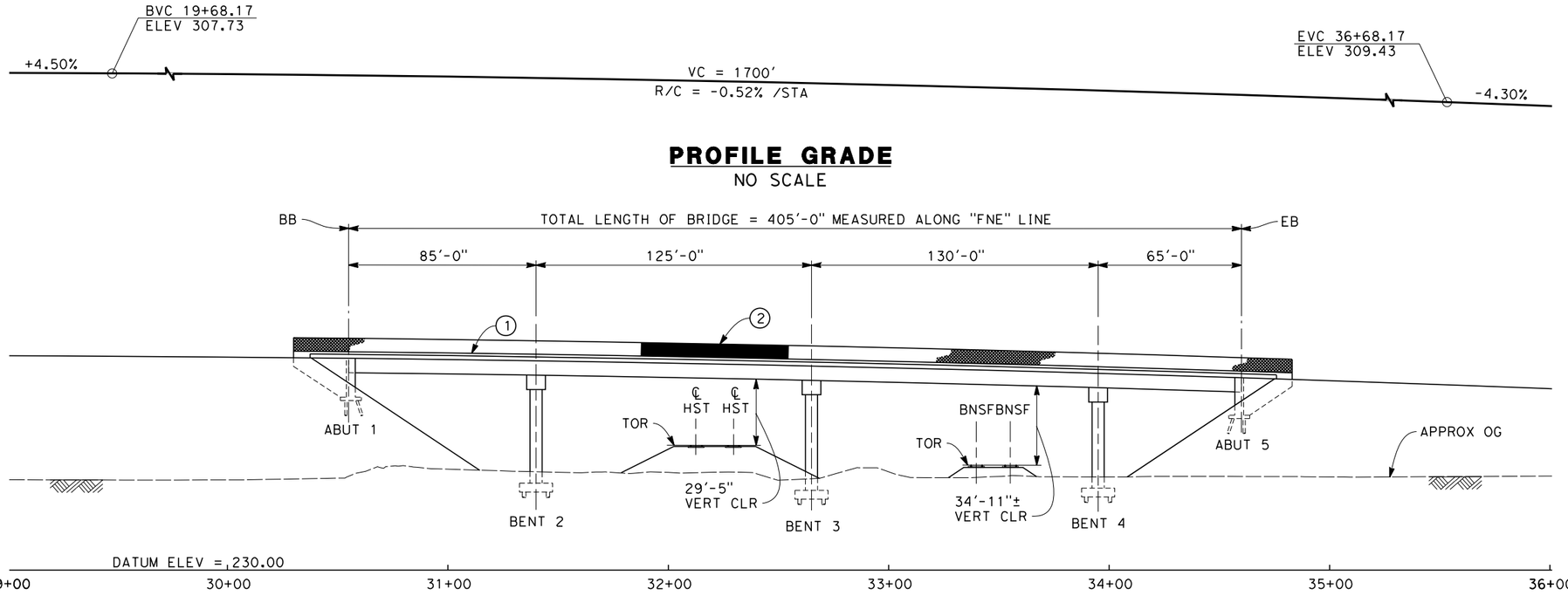
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URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

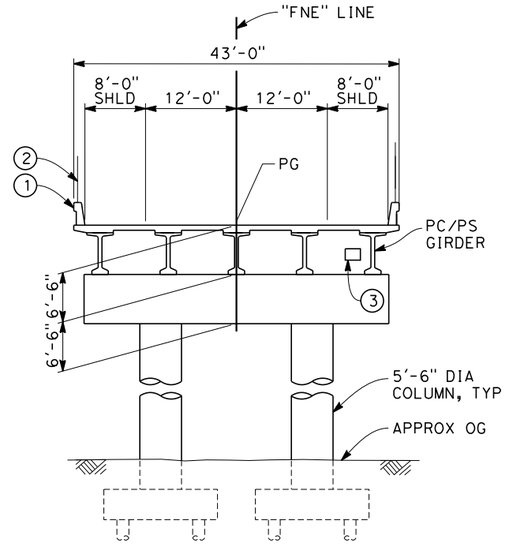
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E FLORAL AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2109
SCALE AS SHOWN
SHEET NO. 7 OF 9

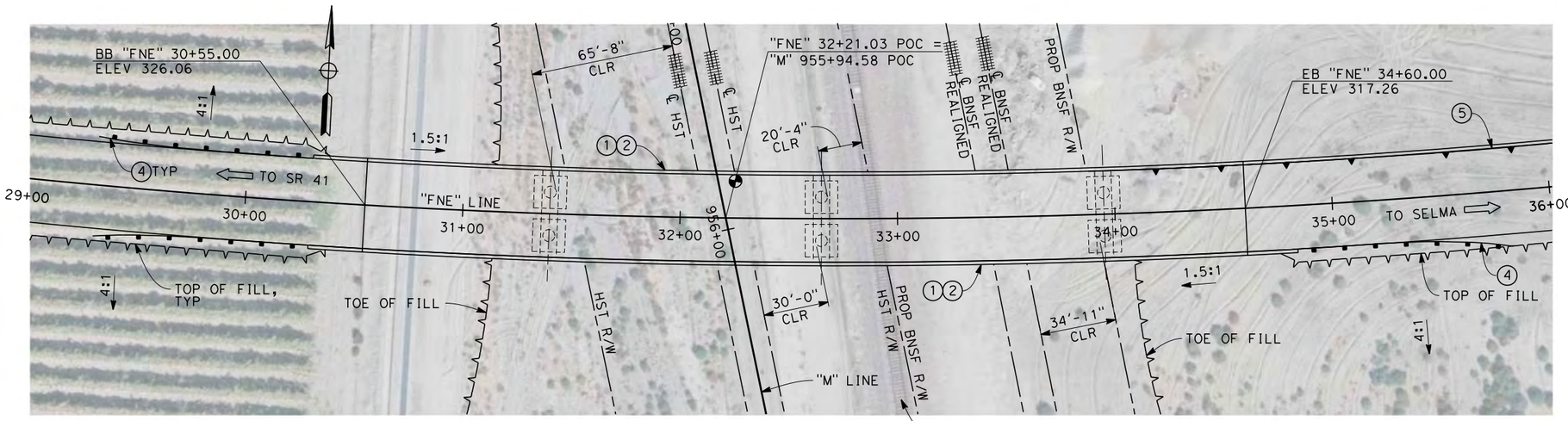


PROFILE GRADE
NO SCALE

ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR
5. RETAINING WALL

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

12/24/2013 9:05:27 AM c:\pwworking\hmm\external\pre45072\dms91110\VFB-ST-2111-M.dgn

PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

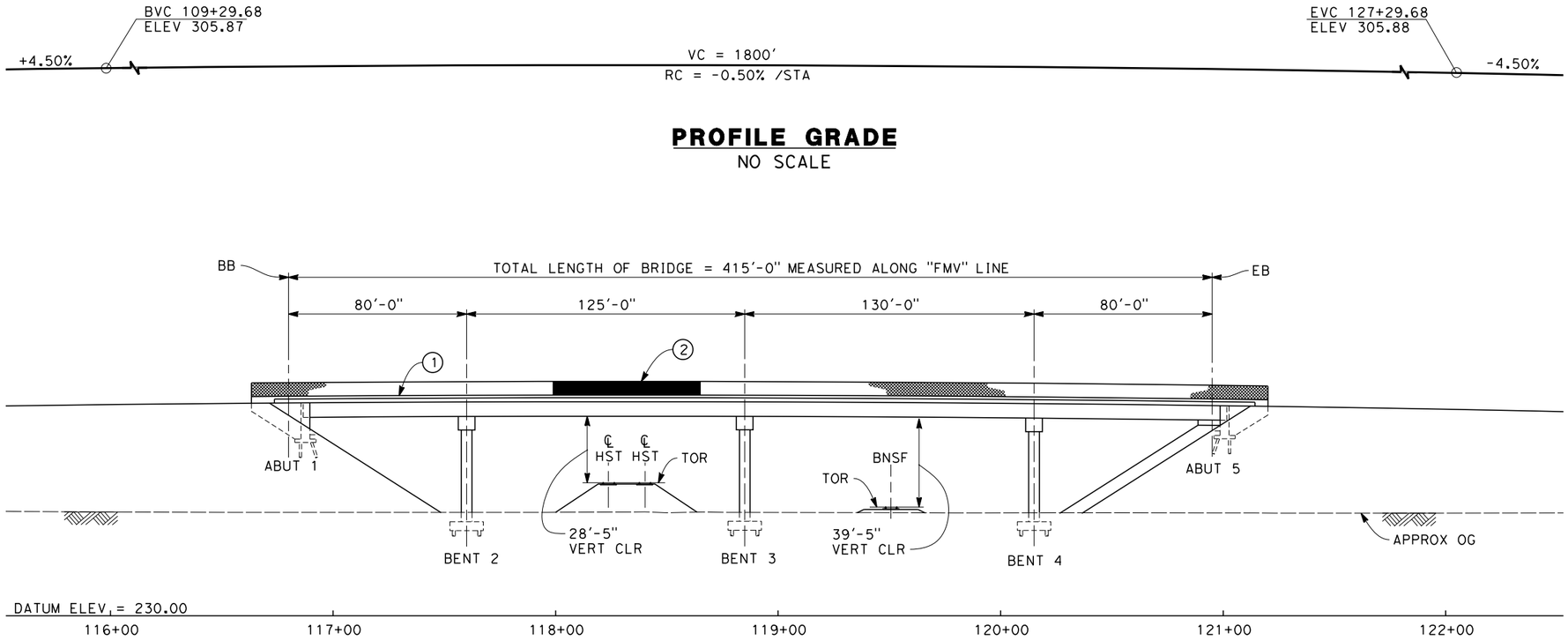
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

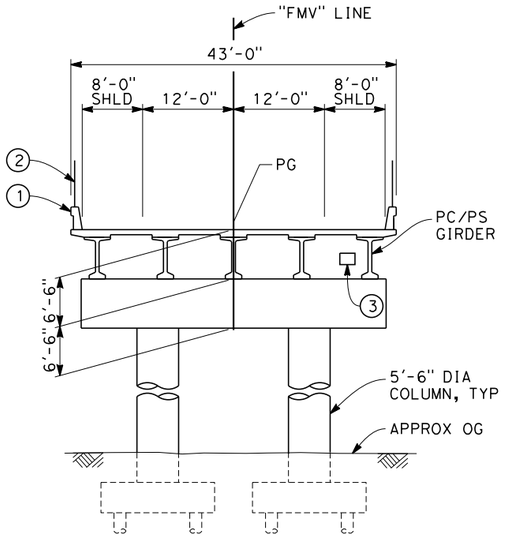
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E NEBRASKA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2111
SCALE AS SHOWN
SHEET NO. 8 OF 9

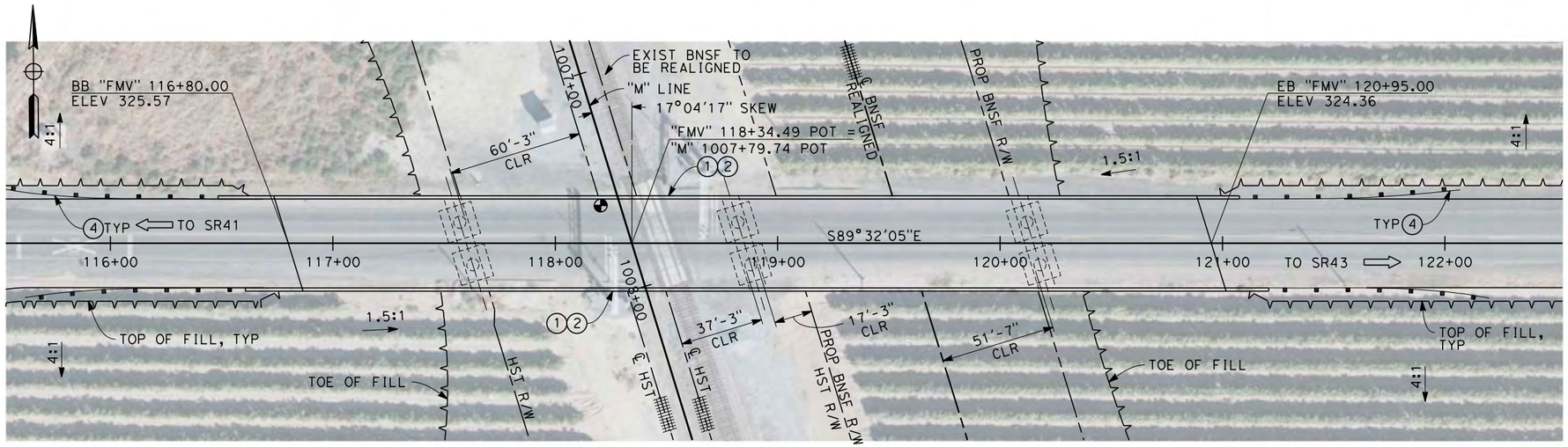


PROFILE GRADE
NO SCALE

ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY T. PRETZER
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
MONMOUTH SUBSECTION
ALIGNMENT M
OVERHEAD PLANNING STUDY
E MOUNTAIN VIEW AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2113
SCALE AS SHOWN
SHEET NO. 9 OF 9



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY: B. LUSCOMBE
DRAWN BY: D. BARNHART
CHECKED BY: M. ANDREWS
IN CHARGE: R. COFFIN
DATE: 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

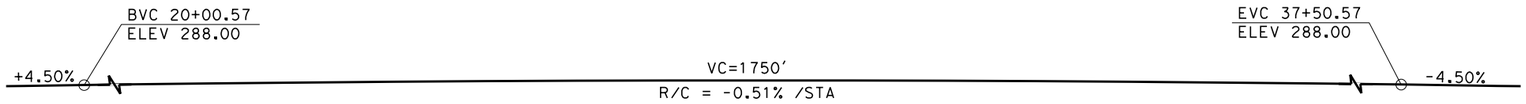
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SB0050
SCALE AS SHOWN
SHEET NO. 1 OF 14

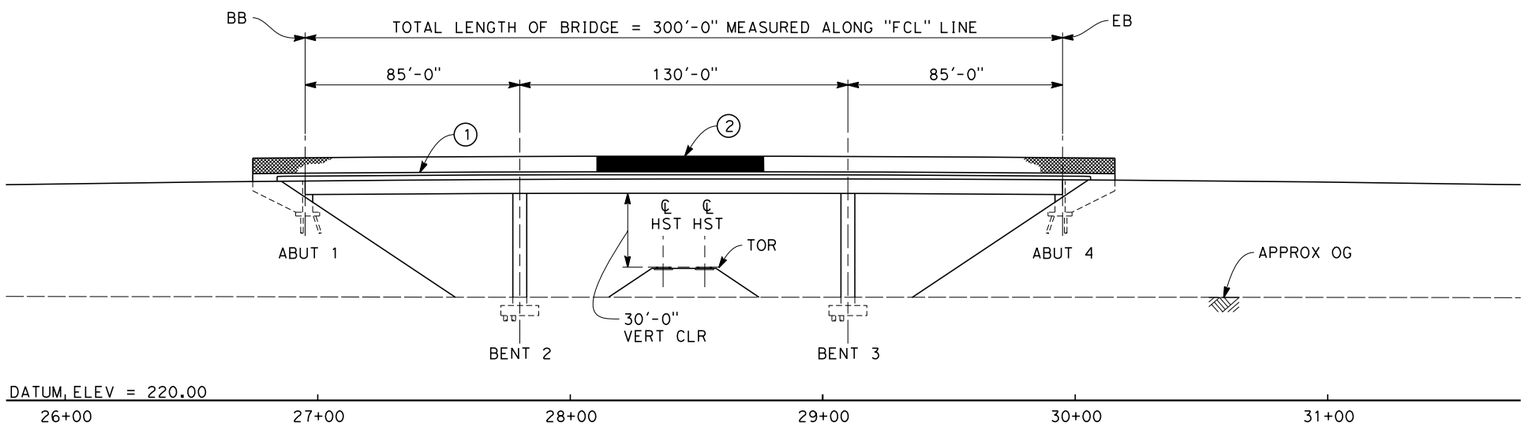
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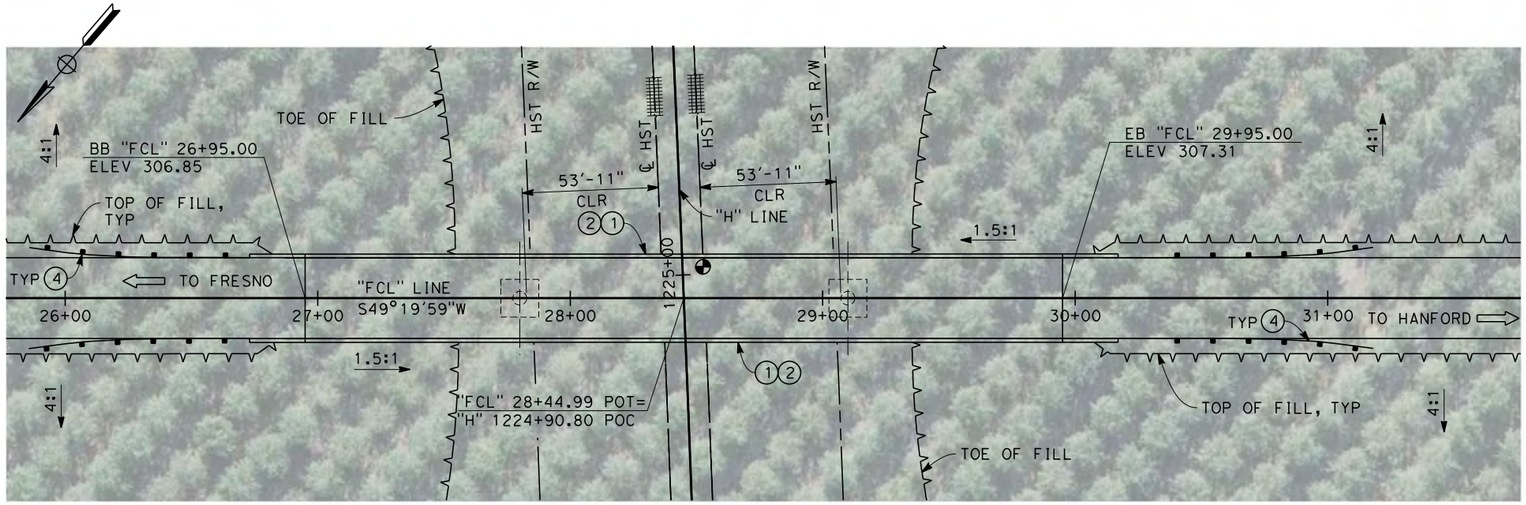
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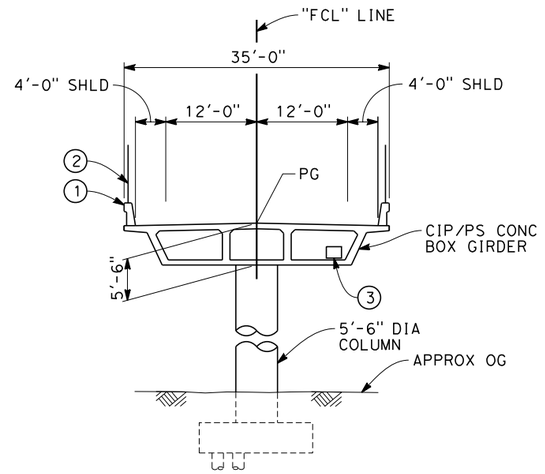
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE

(2) AR FENCE WITH SOLID PLATE OVER HST

(3) FUTURE UTILITY ENCASEMENT OPENING

(4) MBGR

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

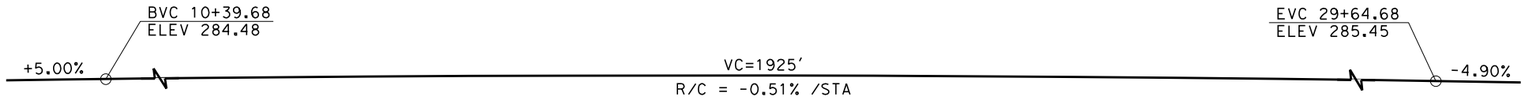
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

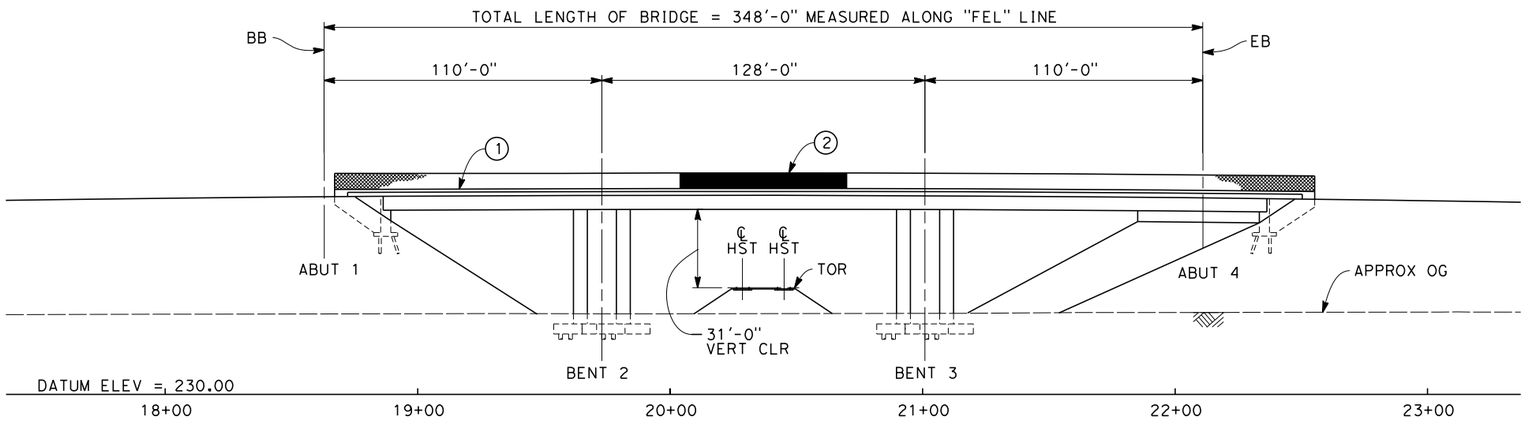
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
S CLOVIS AVE

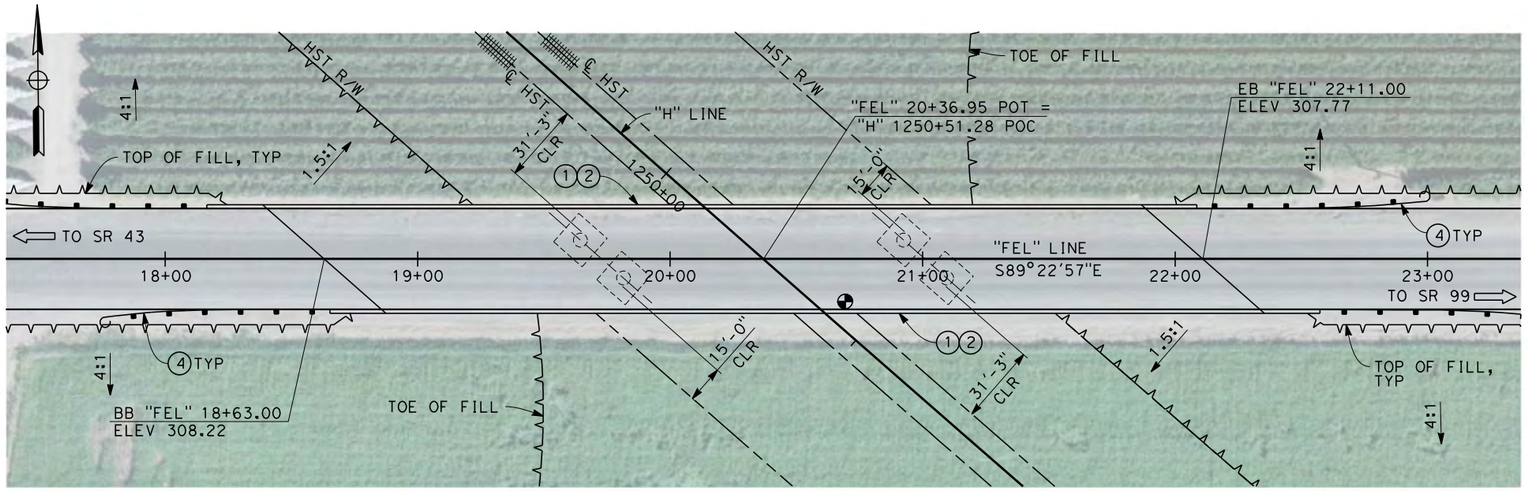
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2117
SCALE AS SHOWN
SHEET NO. 2 OF 14



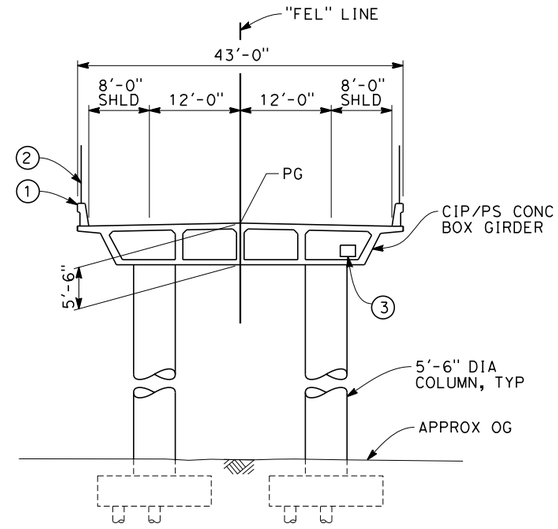
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

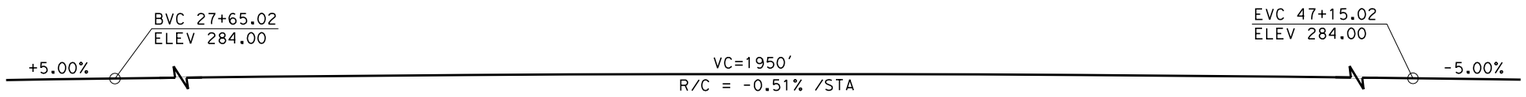
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

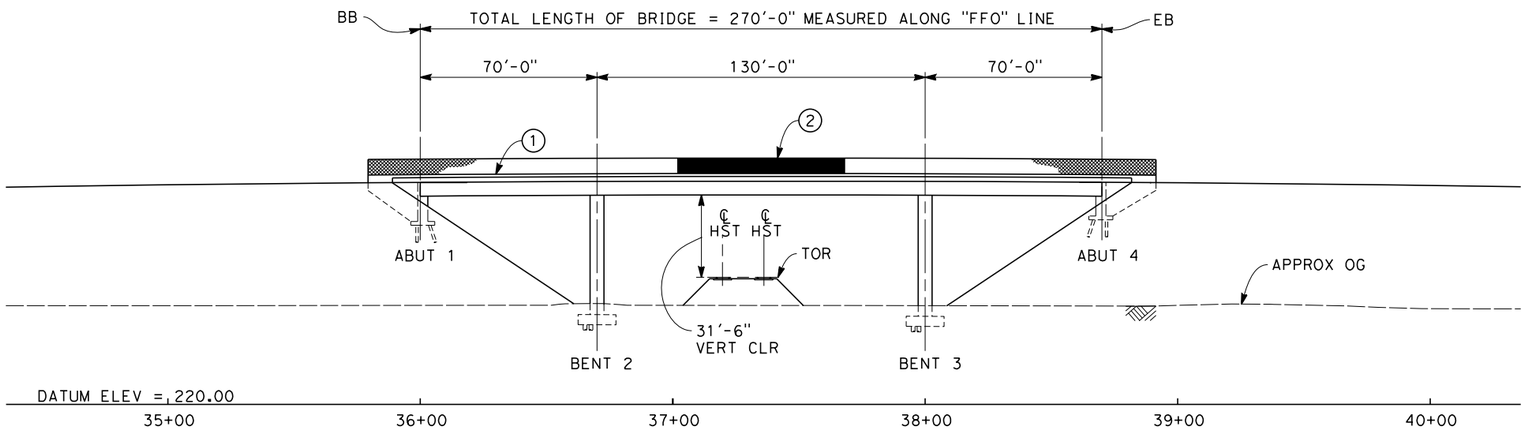
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2119
SCALE AS SHOWN
SHEET NO. 3 OF 14

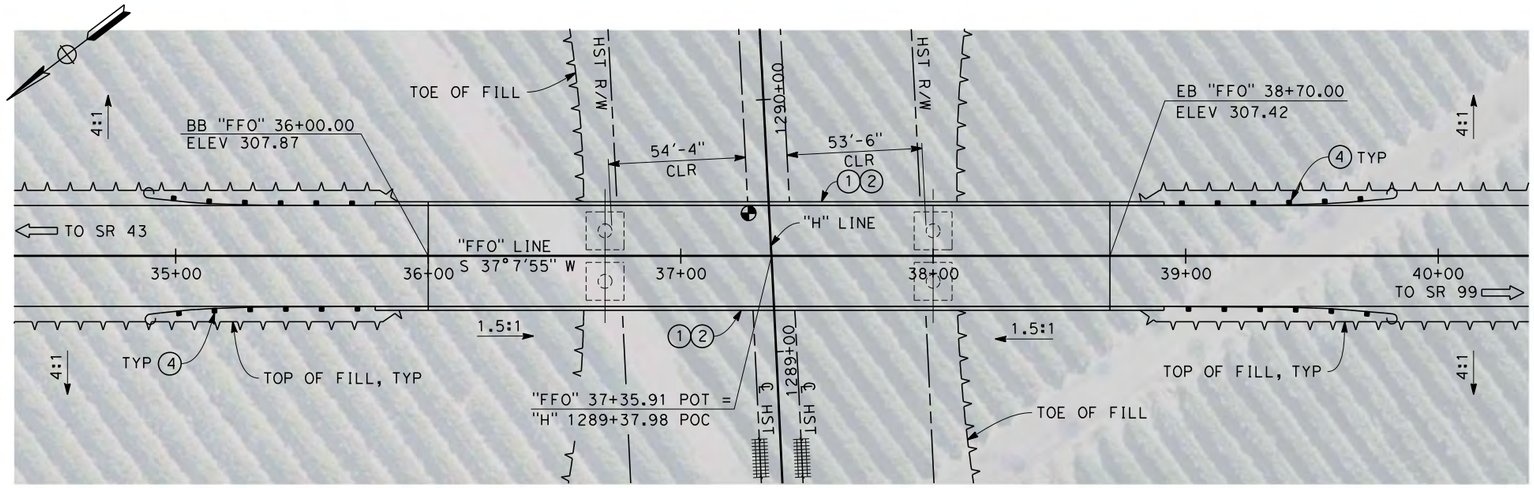
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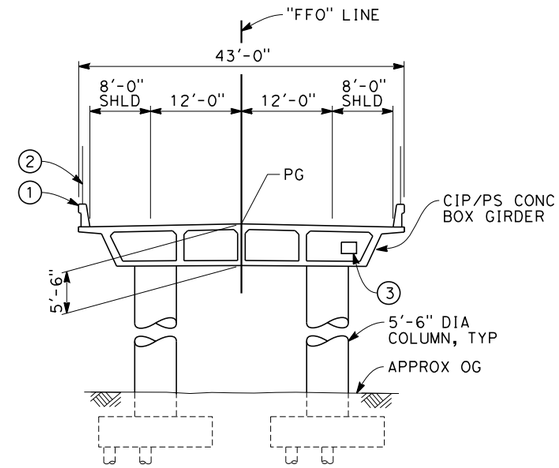
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE

(2) AR FENCE WITH SOLID PLATE OVER HST

(3) FUTURE UTILITY ENCASEMENT OPENING

(4) MBGR

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

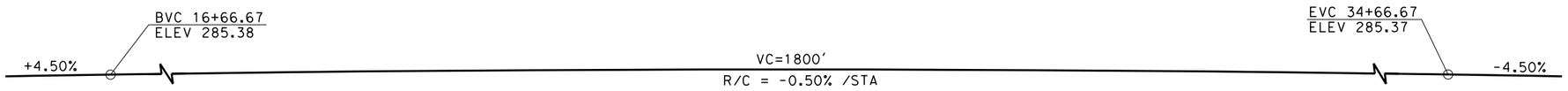
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

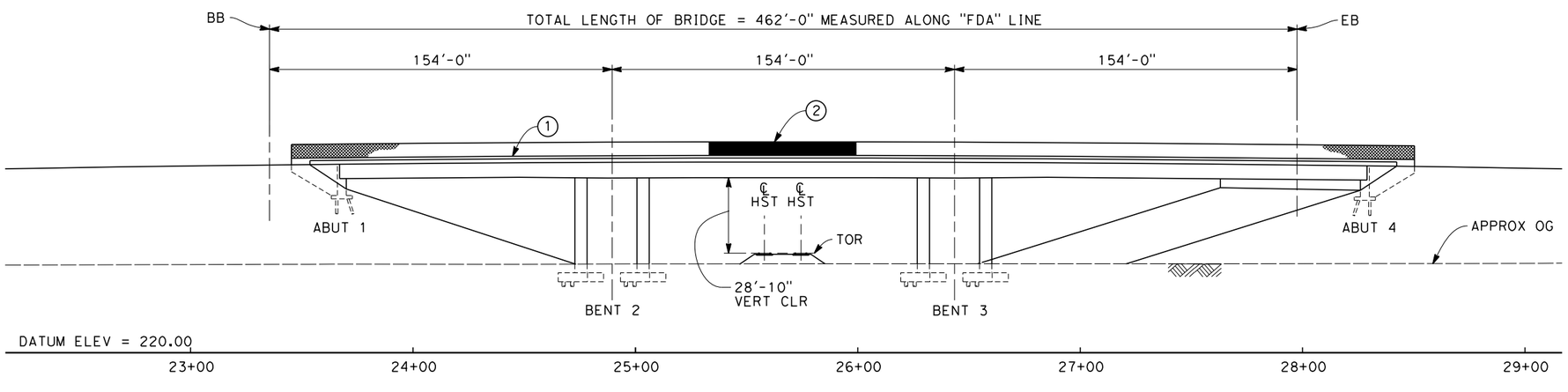
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2121
SCALE AS SHOWN
SHEET NO. 4 OF 14

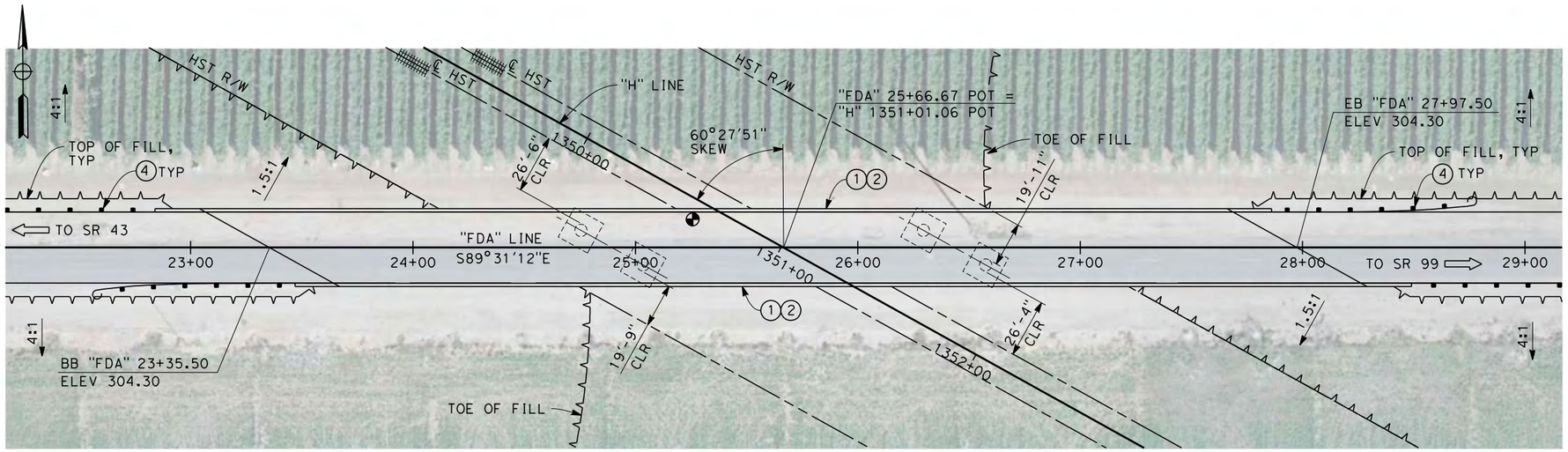
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PRE45072



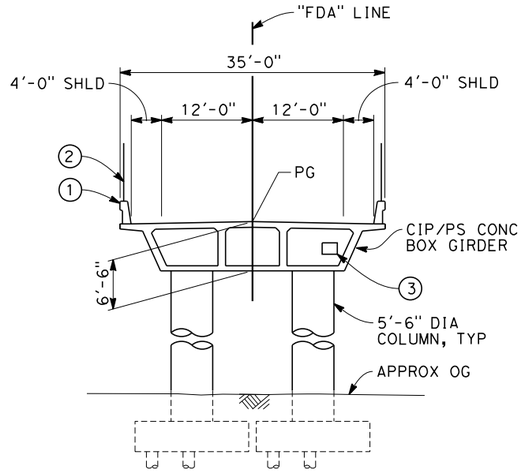
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

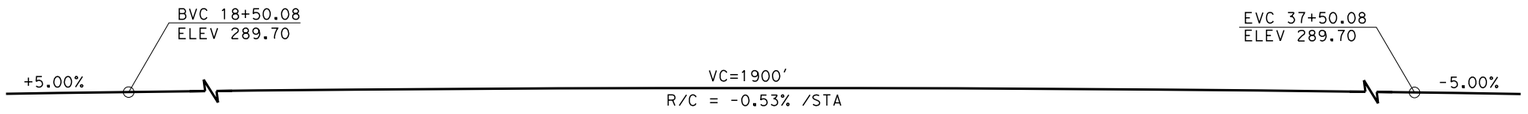
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

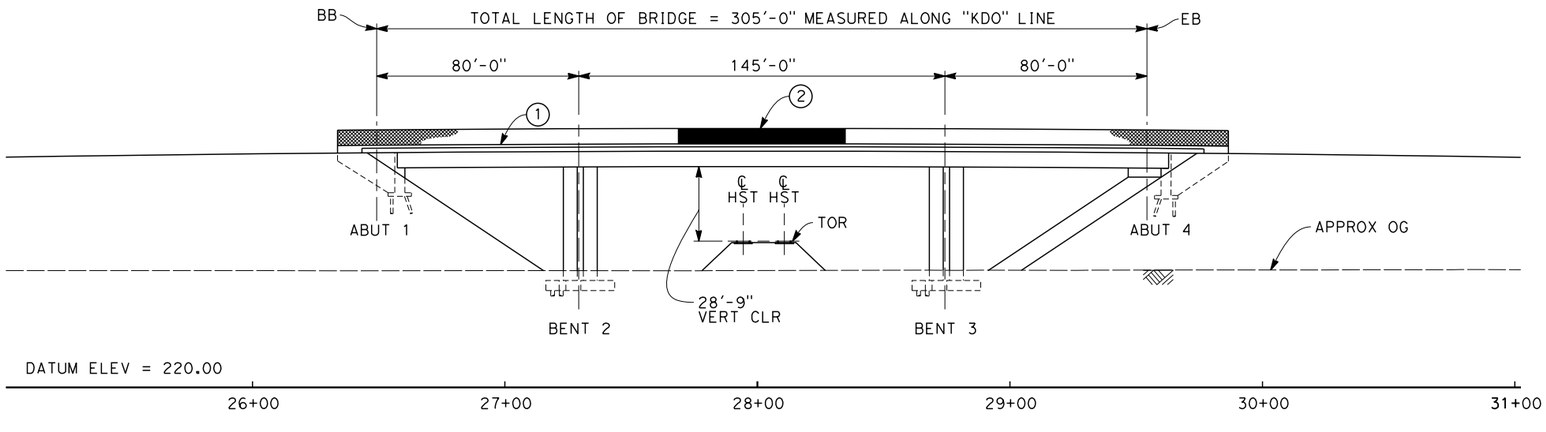
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2123
SCALE AS SHOWN
SHEET NO. 5 OF 14

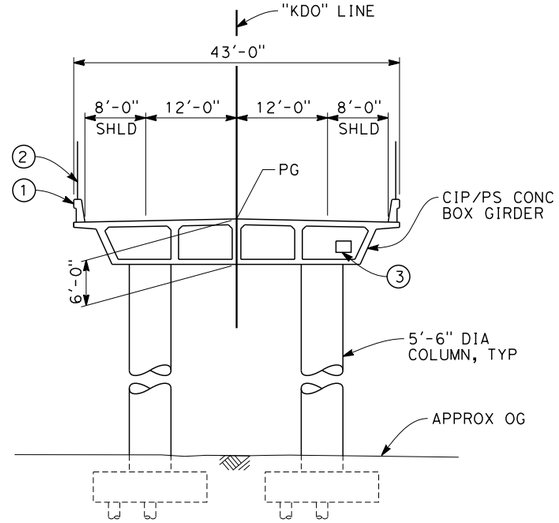
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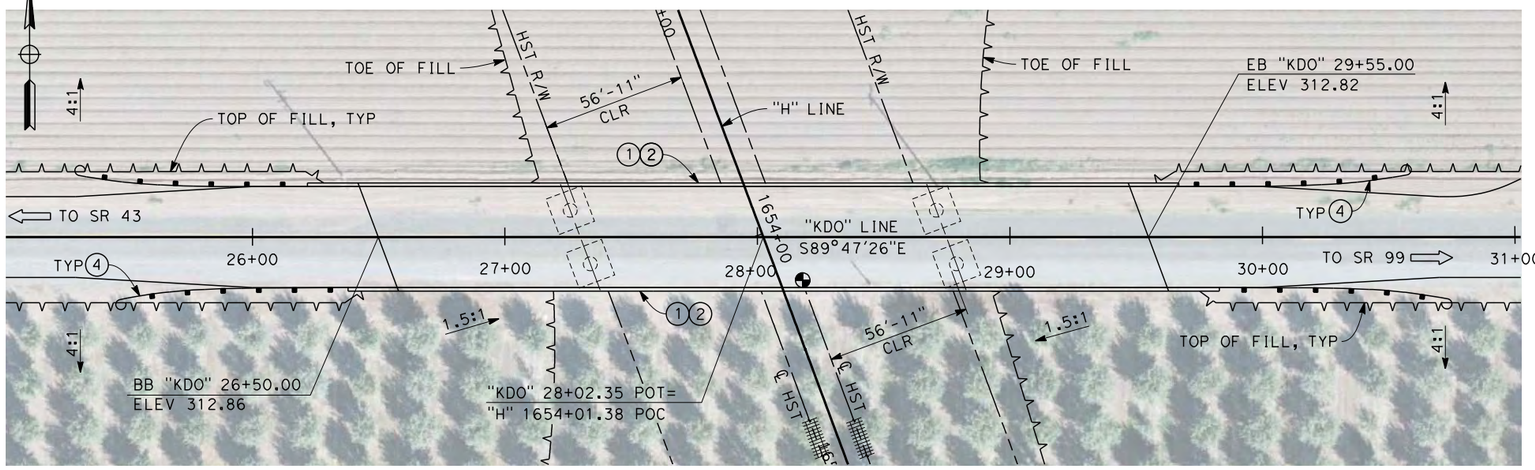
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

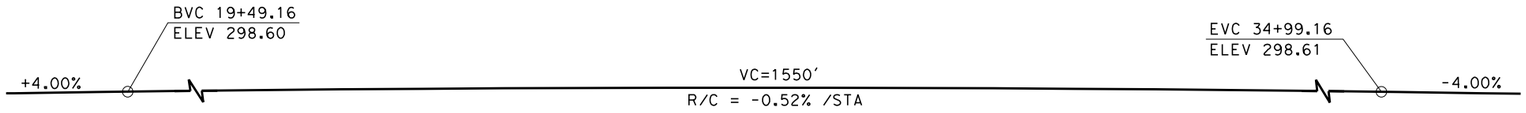
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
DOVER AVE

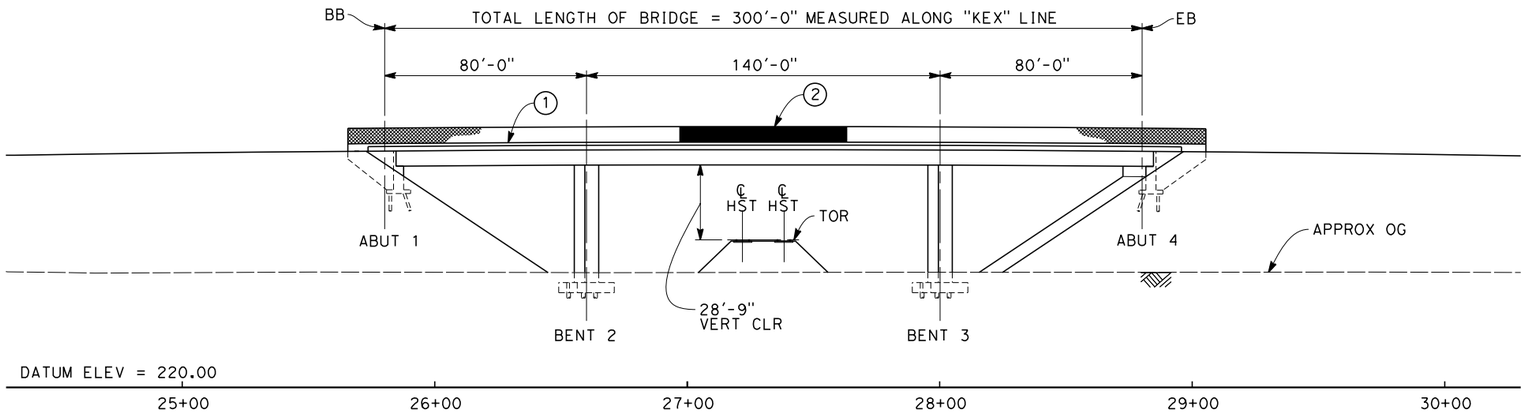
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2129
SCALE AS SHOWN
SHEET NO. 6 OF 14

04/02/2014 - RFP No.: HSR13-57

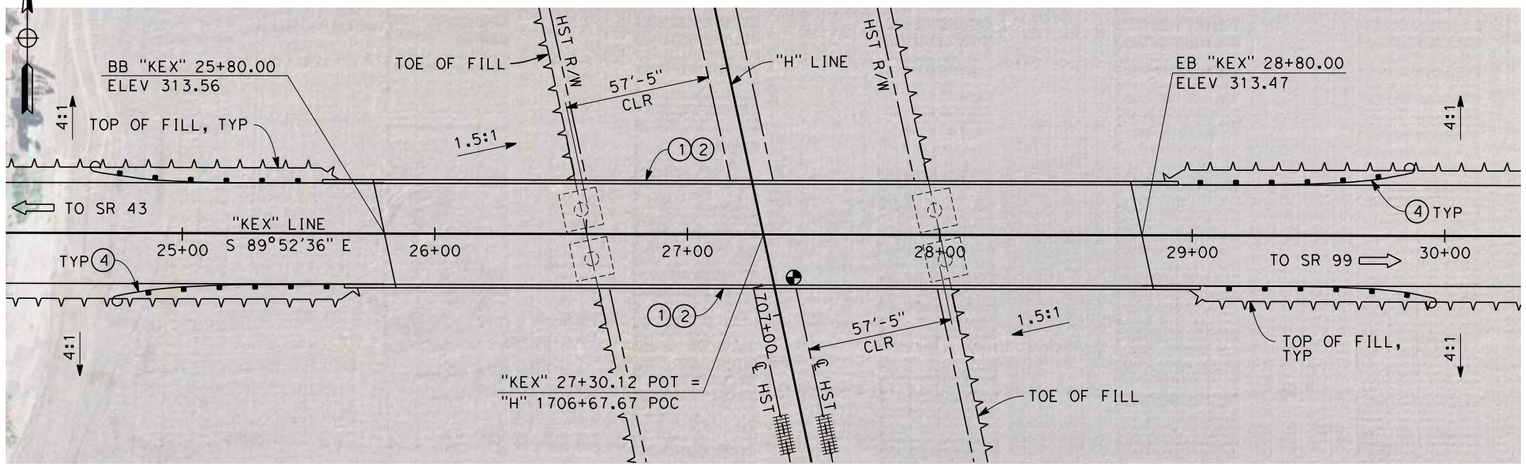
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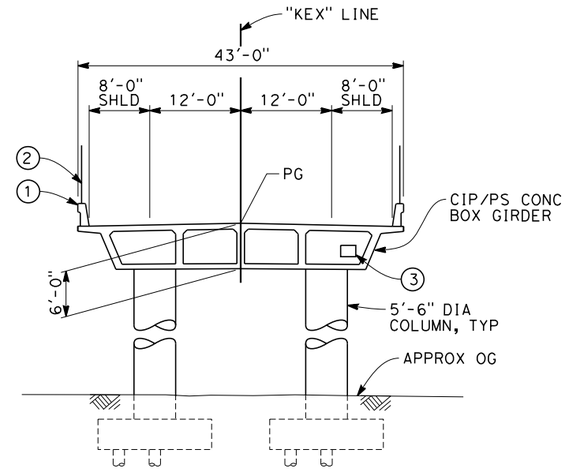
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE

(2) AR FENCE WITH SOLID PLATE OVER HST

(3) FUTURE UTILITY ENCASEMENT OPENING

(4) MBGR

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

12/27/2013 8:40:20 AM c:\pwworking\hmm\external\pre45072\dms91106\VFB-ST-2133-H.dgn

PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

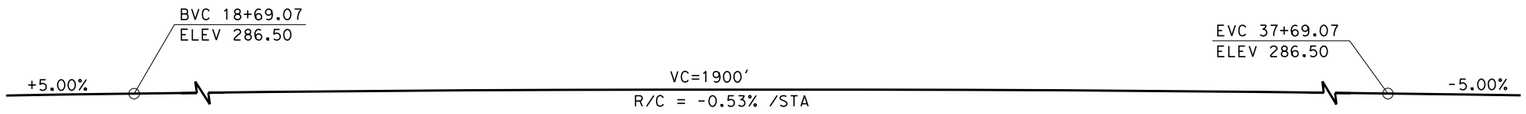
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

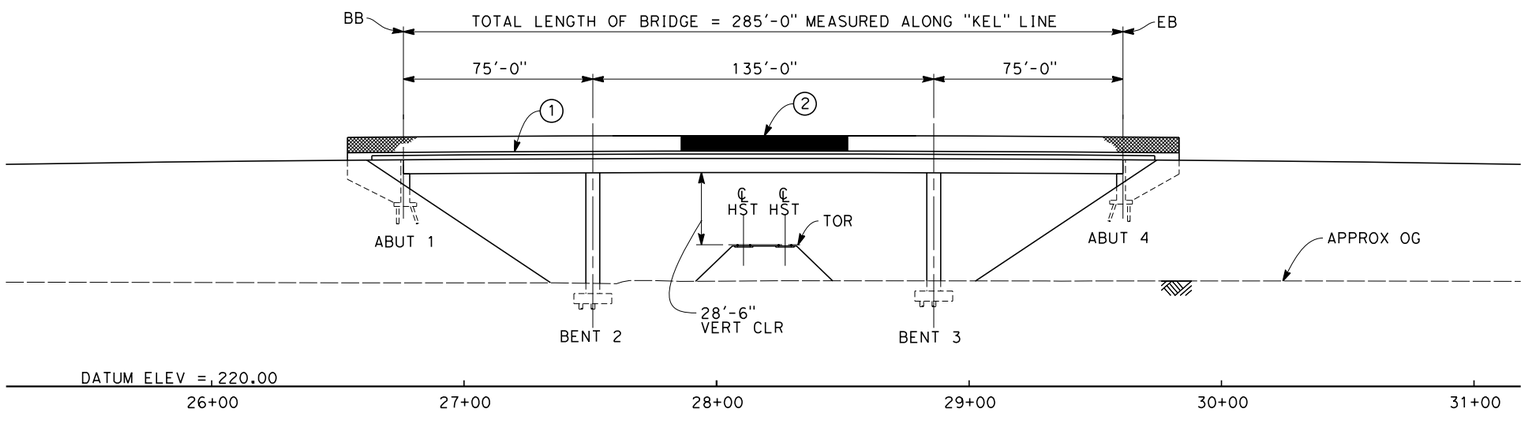
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
EXCELSIOR AVE

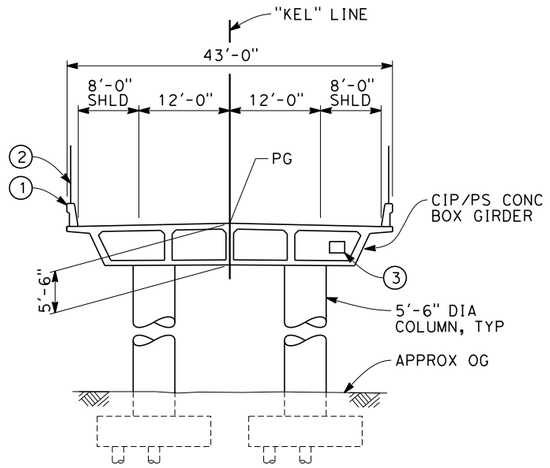
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2133
SCALE AS SHOWN
SHEET NO. 7 OF 14



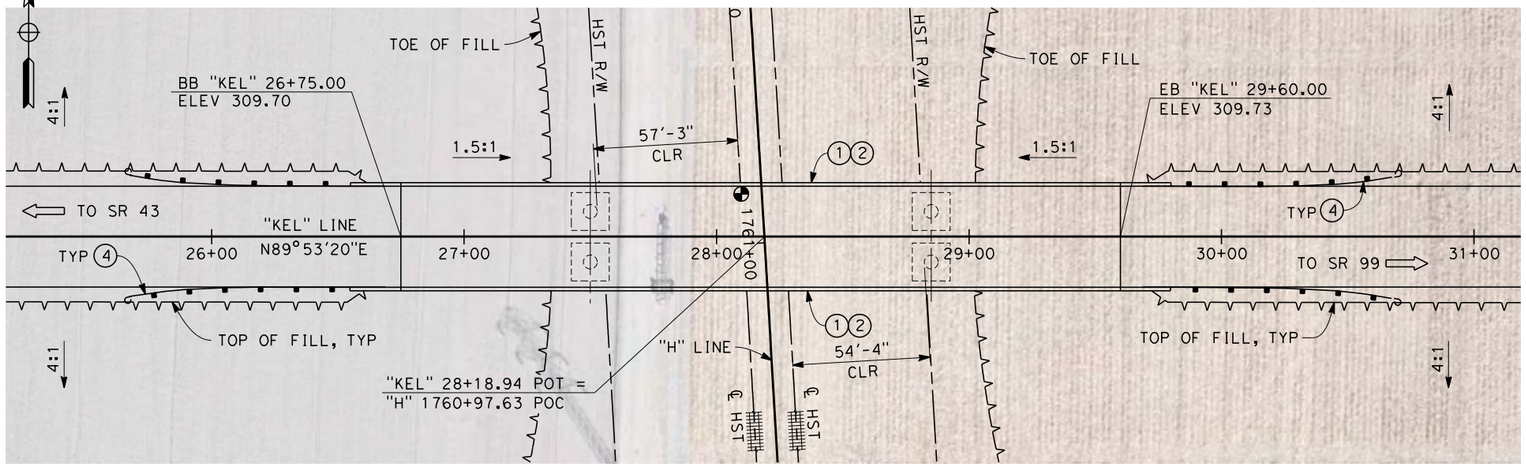
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

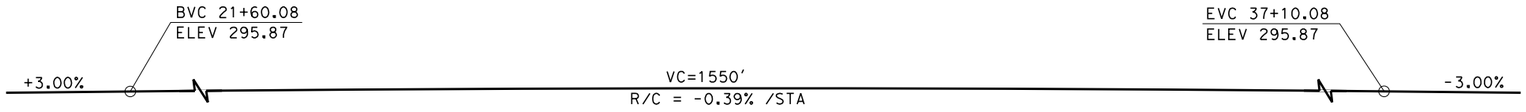
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

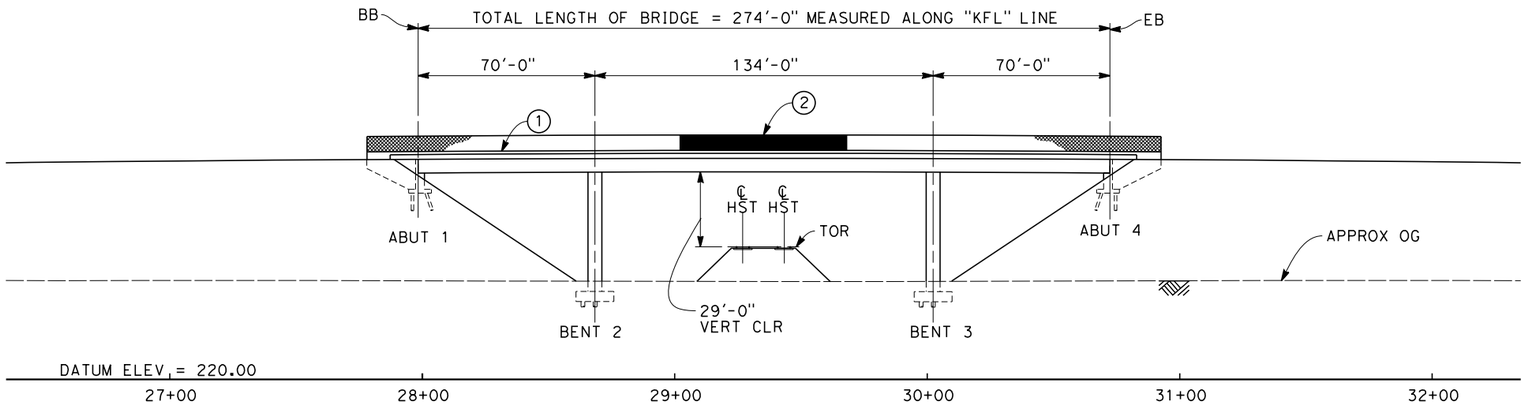
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
ELDER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2135
SCALE AS SHOWN
SHEET NO. 8 OF 14

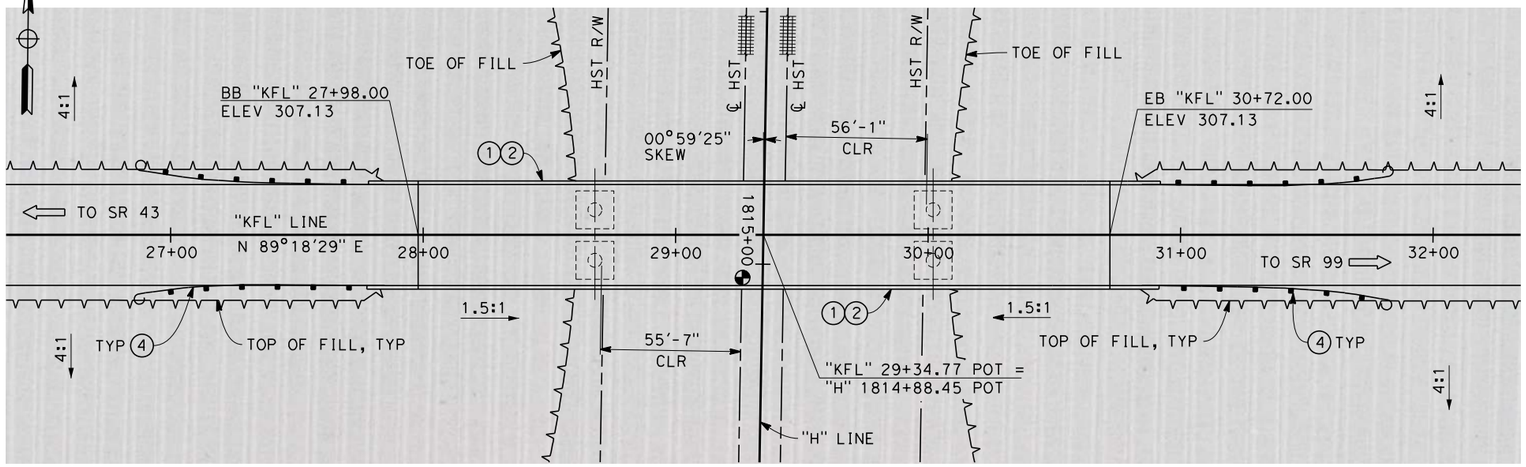
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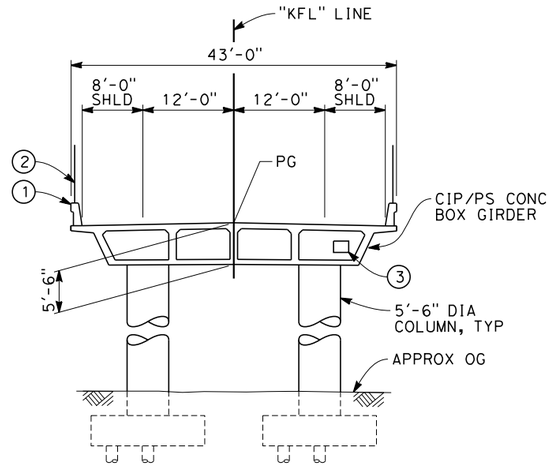
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

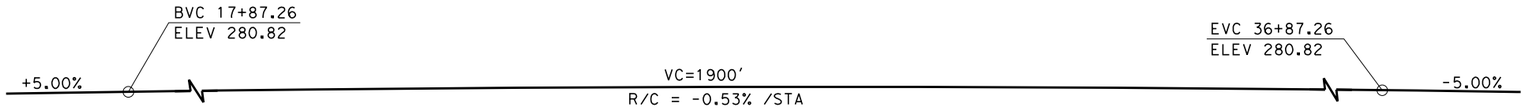
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

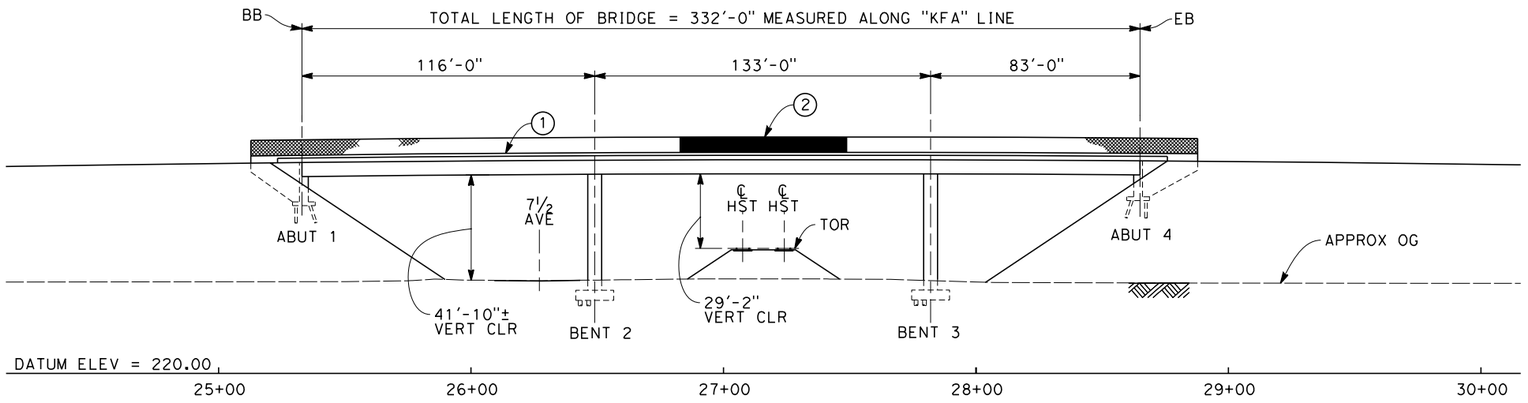
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2137
SCALE AS SHOWN
SHEET NO. 9 OF 14

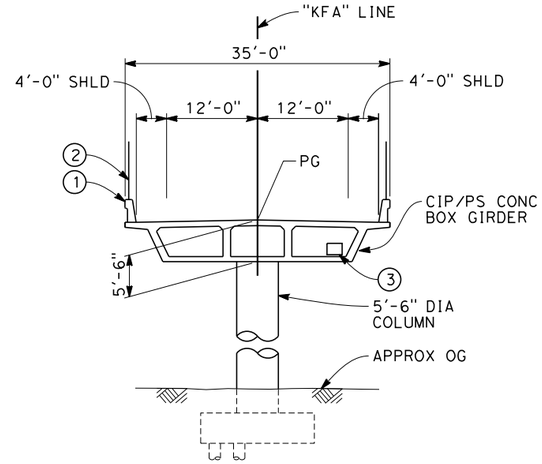
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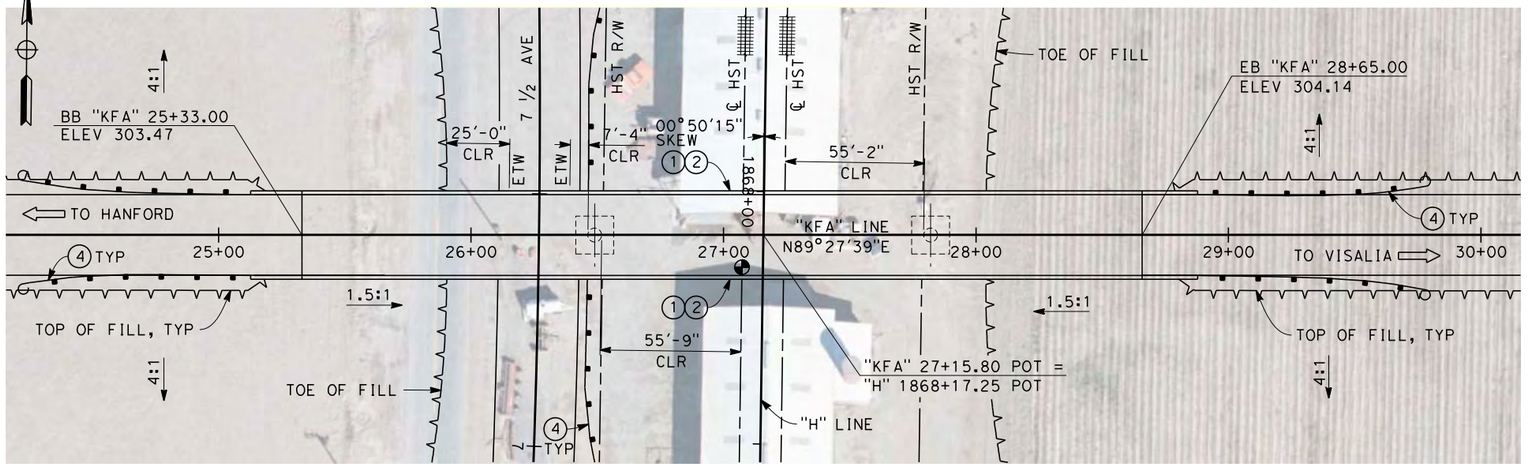
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN.
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE

(2) AR FENCE WITH SOLID PLATE OVER HST

(3) FUTURE UTILITY ENCASEMENT OPENING

(4) MBGR

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

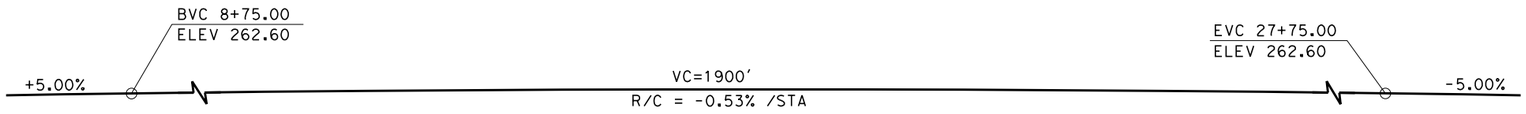
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
FARGO AVE

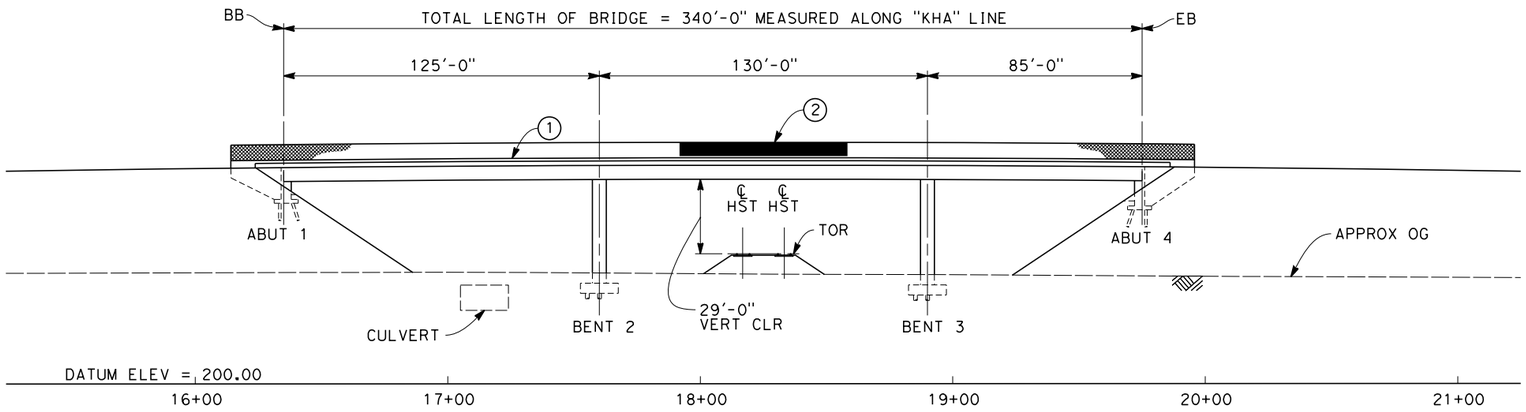
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DRAWING NO. ST2139
SCALE AS SHOWN
SHEET NO. 10 OF 14

04/02/2014 - RFP No.: HSR13-57

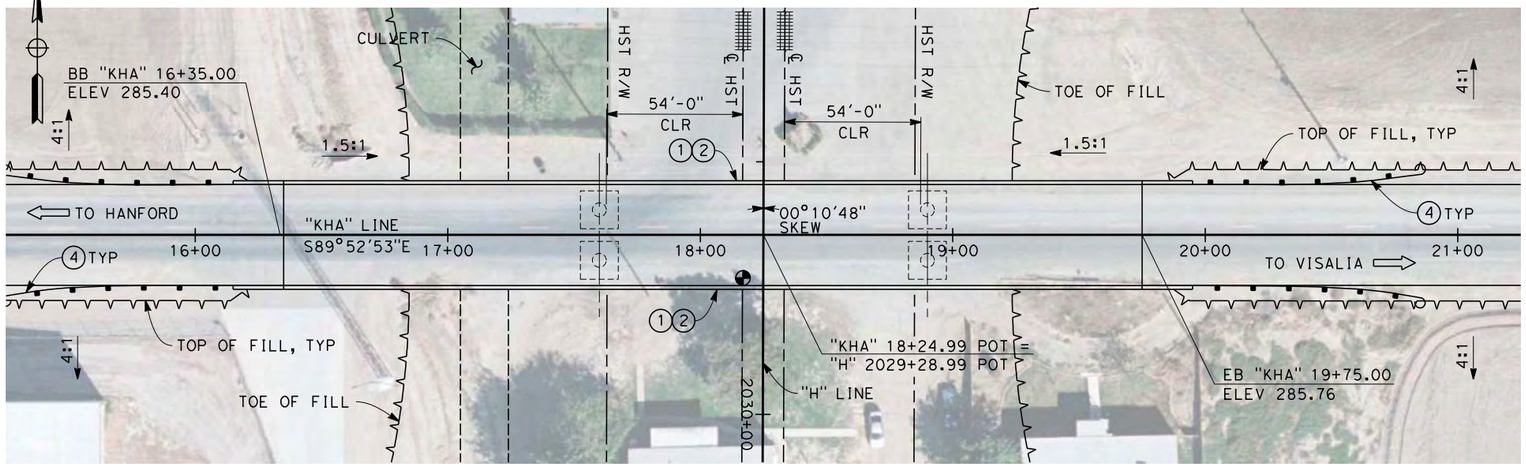
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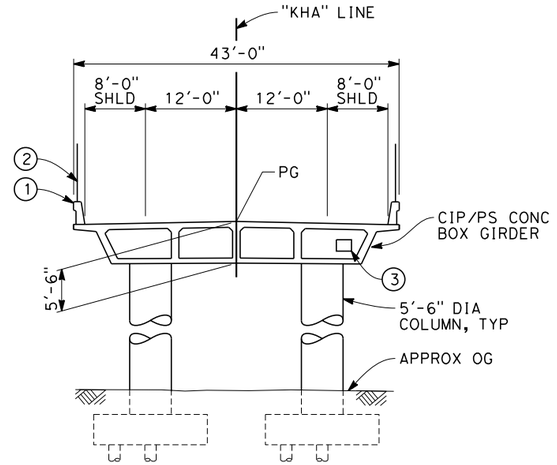
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE

(2) AR FENCE WITH SOLID PLATE OVER HST

(3) FUTURE UTILITY ENCASEMENT OPENING

(4) MBGR

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

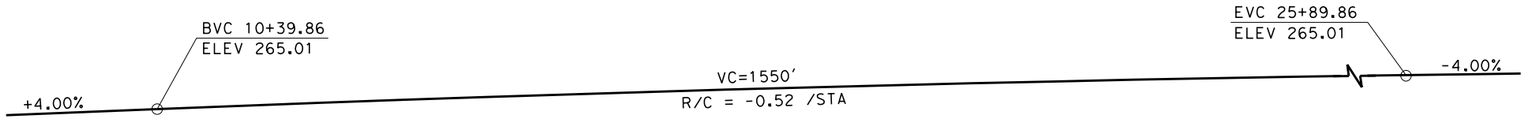
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

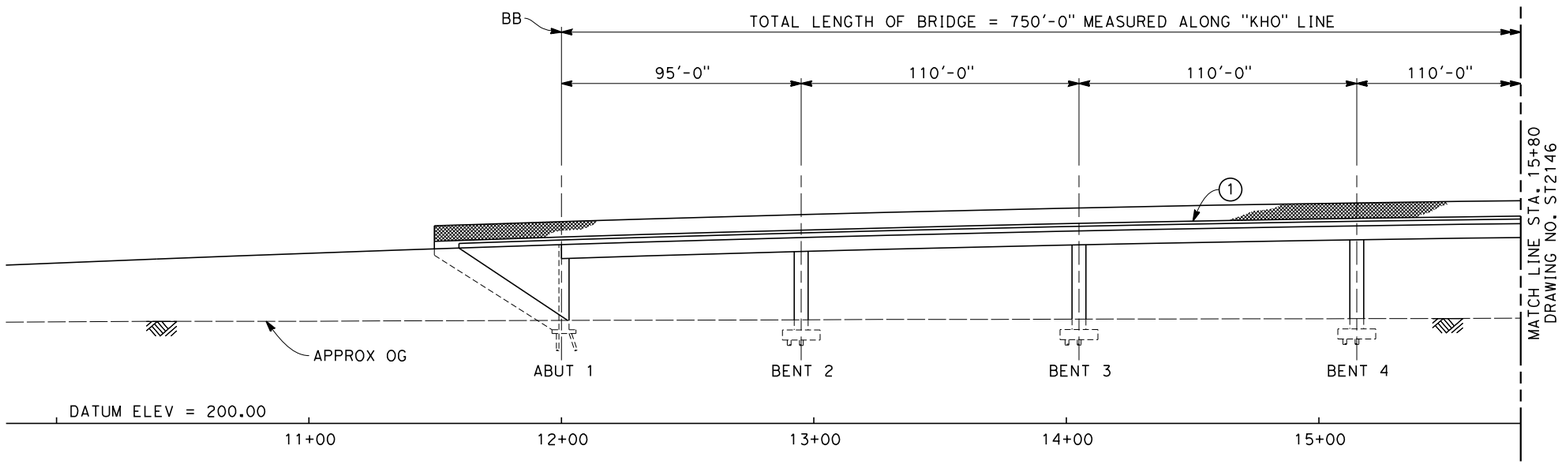
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
HANFORD ARMONA RD

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2143
SCALE AS SHOWN
SHEET NO. 11 OF 14

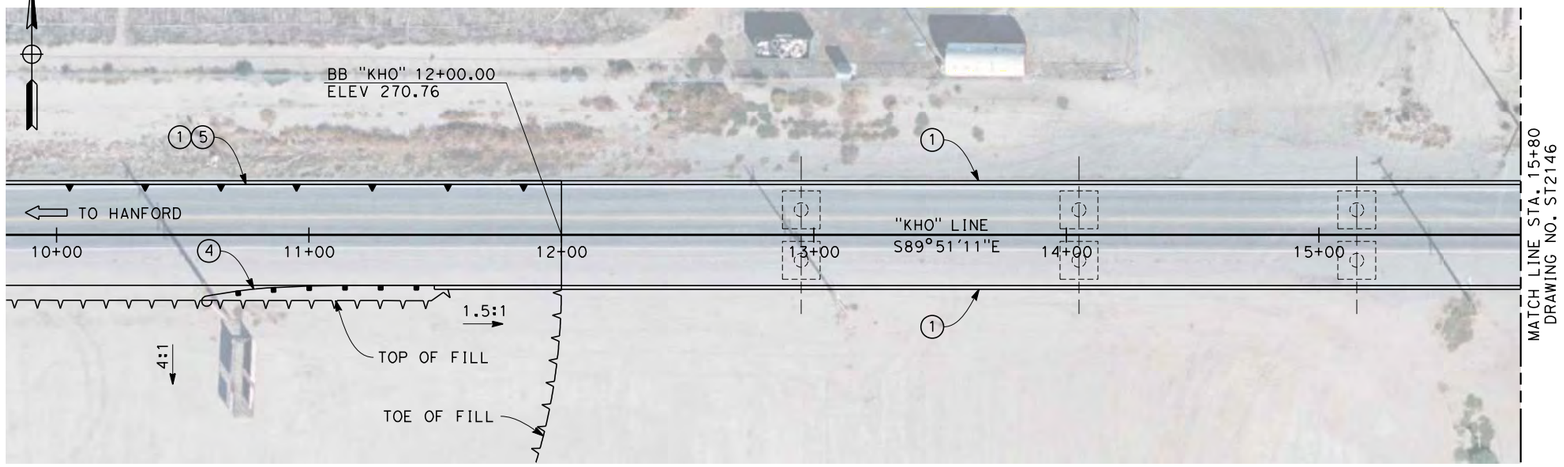
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PRE45072



PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR
(5) RETAINING WALL

30 0 30 60
1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

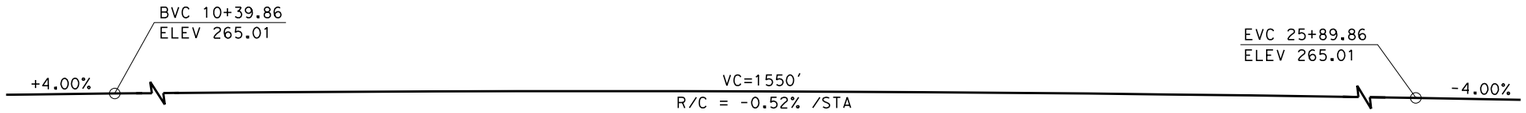
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

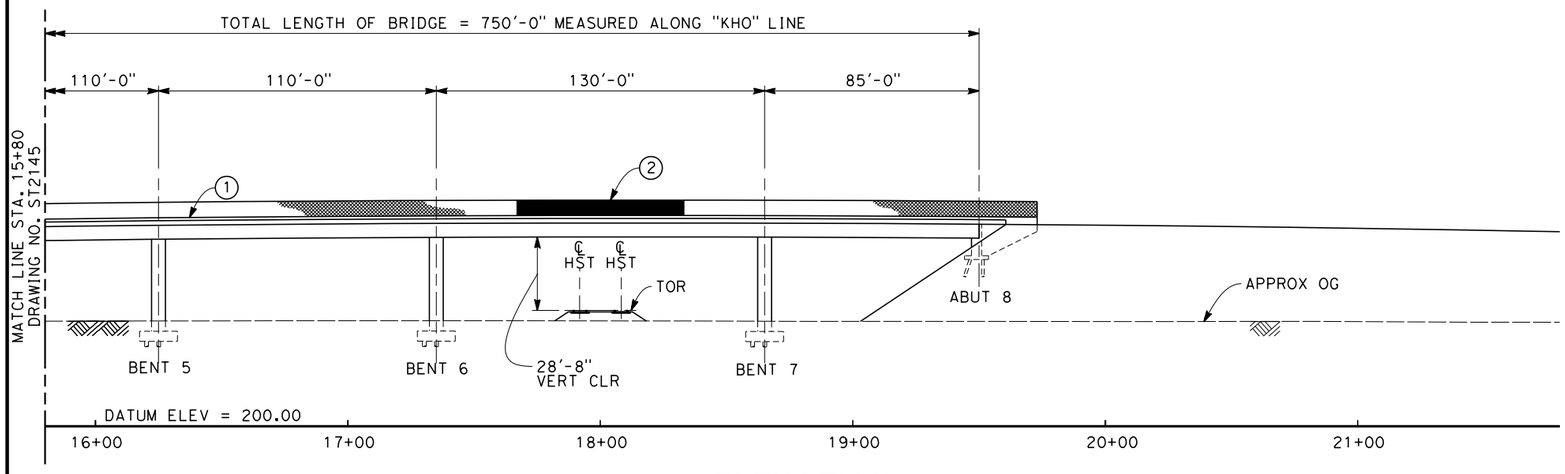
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
HOUSTON AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2145
SCALE AS SHOWN
SHEET NO. 12 OF 14

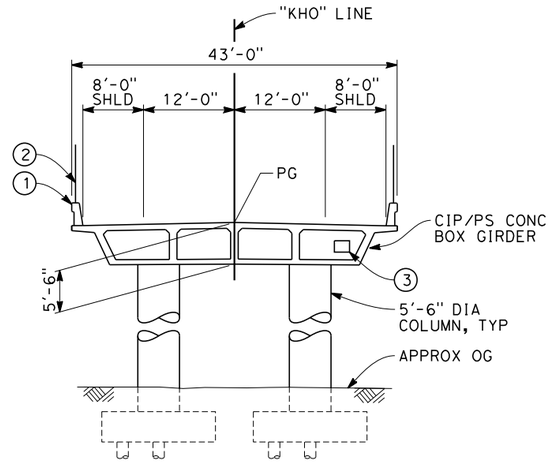
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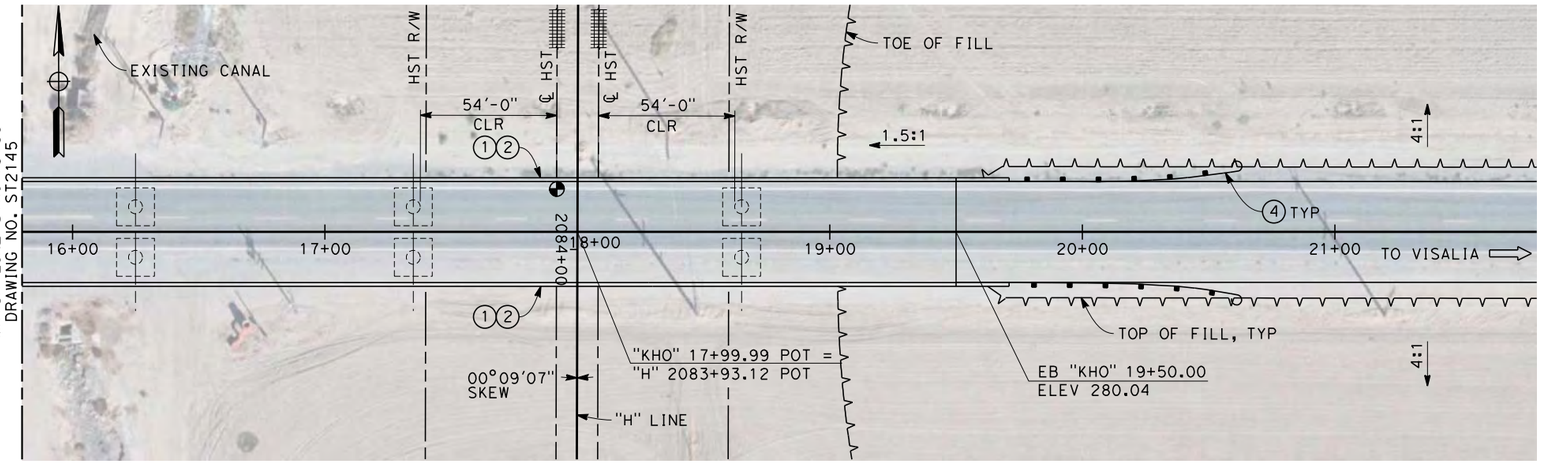
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20
1"=10'

30 0 30 60
1"=30'

04/02/2014 - RFP No.: HSR13-57

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PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

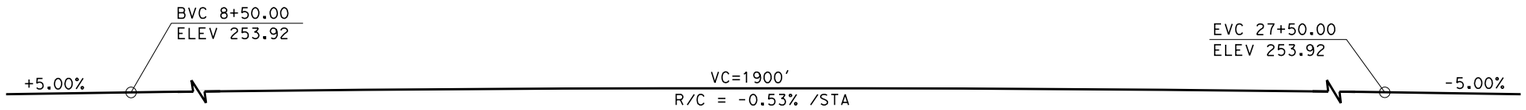
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

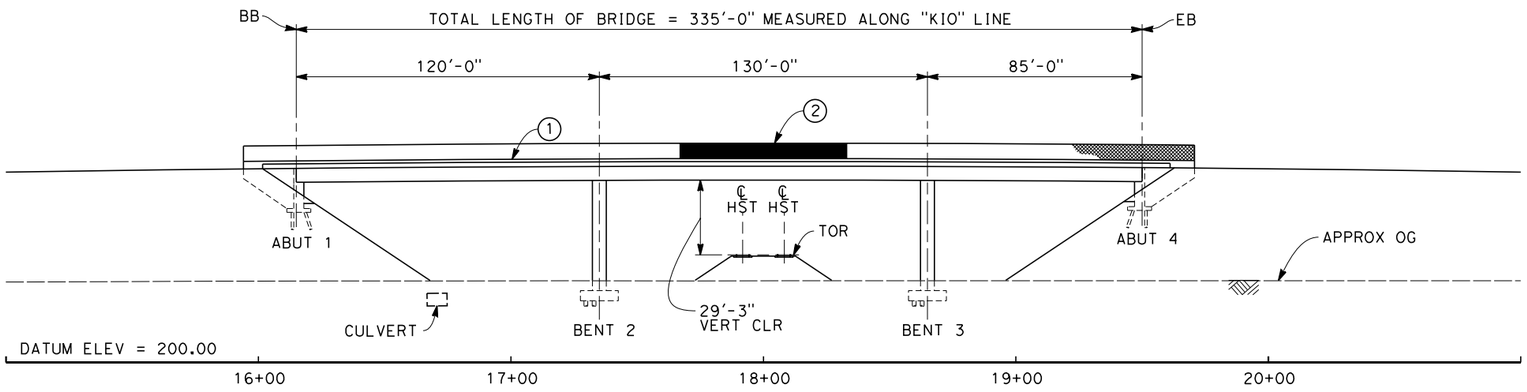
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
HOUSTON AVE

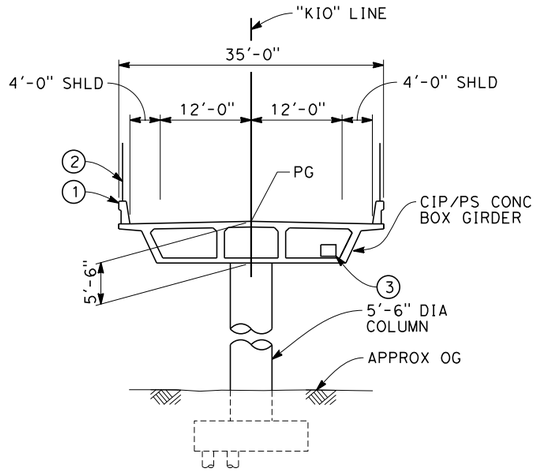
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DRAWING NO. ST2146
SCALE AS SHOWN
SHEET NO. 13 OF 14



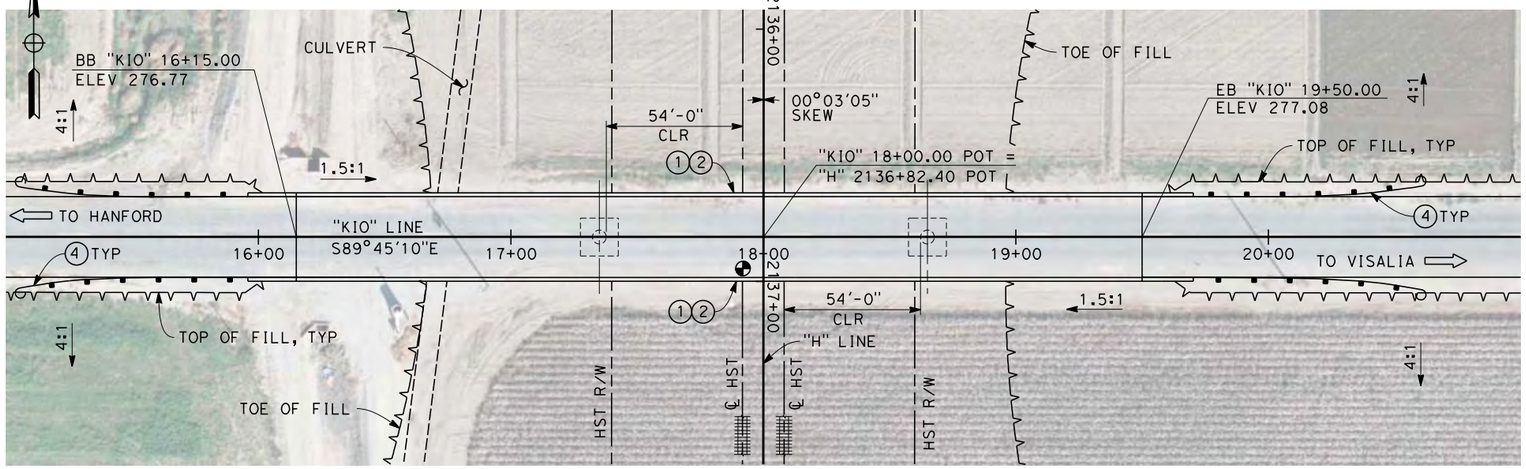
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20
1"=10'

10 0 30 60
1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY M. ANDREWS
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
HANFORD SUBSECTION
ALIGNMENT H
OVERHEAD PLANNING STUDY
IONA AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2147
SCALE AS SHOWN
SHEET NO. 14 OF 14

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04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

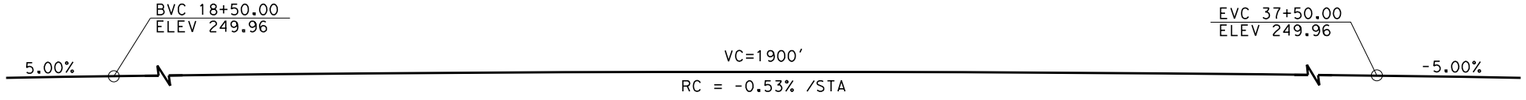
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

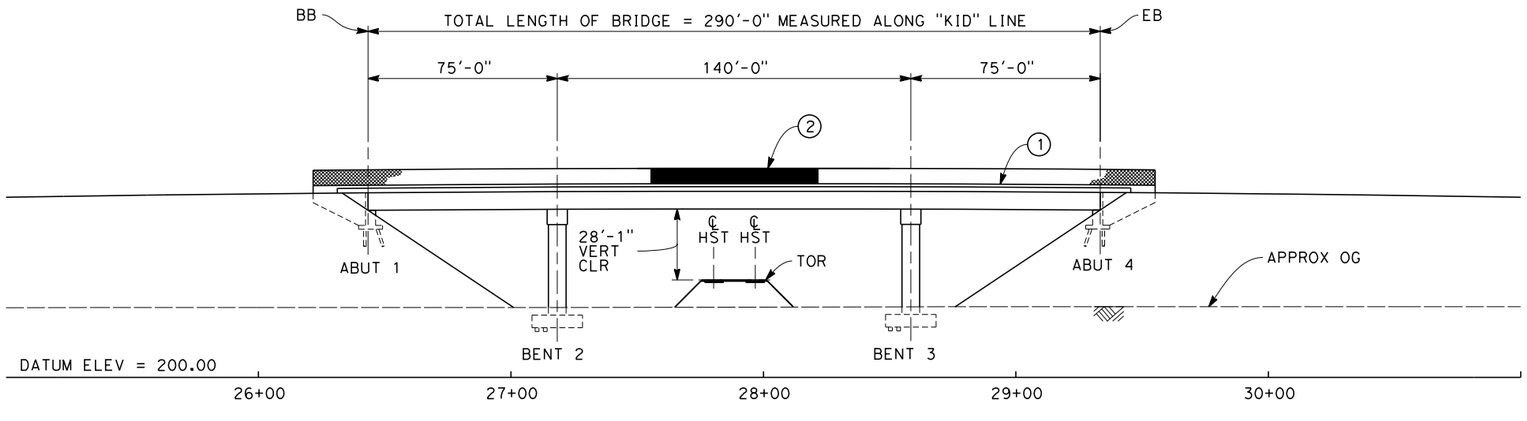
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
OVERHEAD PLANNING STUDY
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SB0065
SCALE AS SHOWN
SHEET NO. 1 OF 5

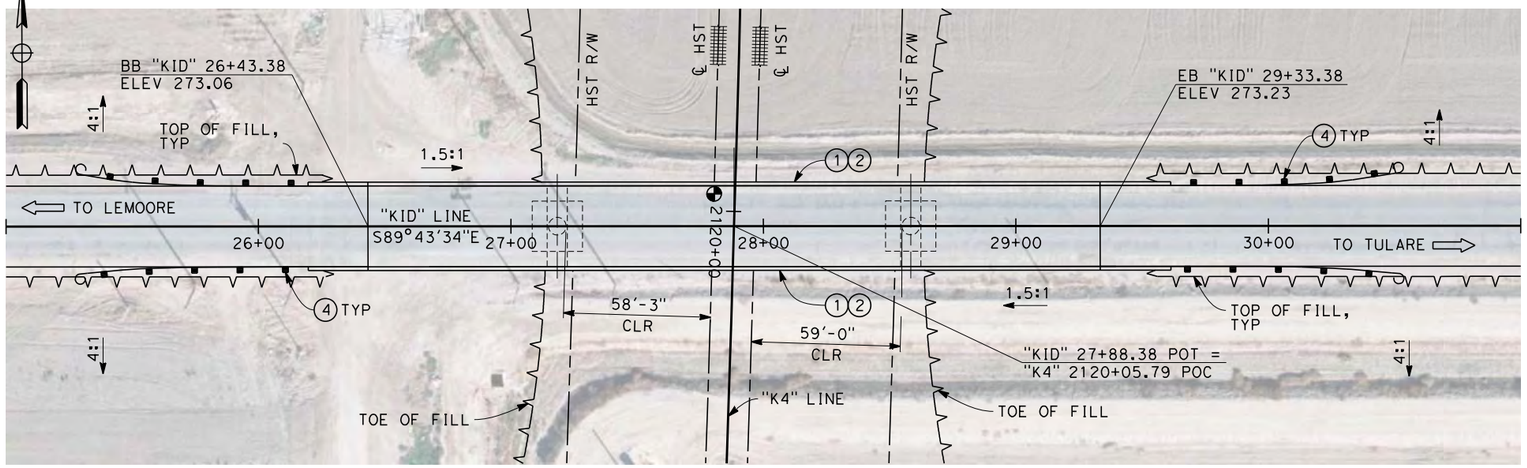
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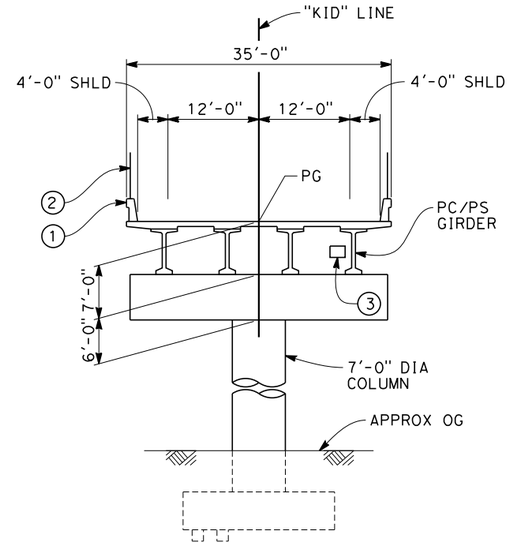
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



PLAN
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

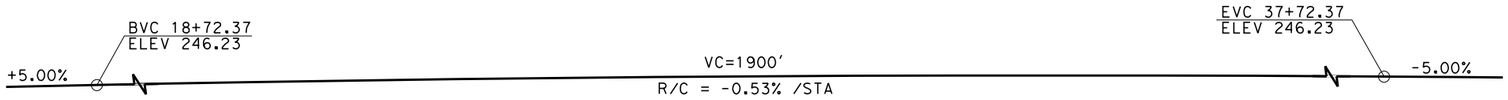
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
OVERHEAD PLANNING STUDY
IDAHO AVE

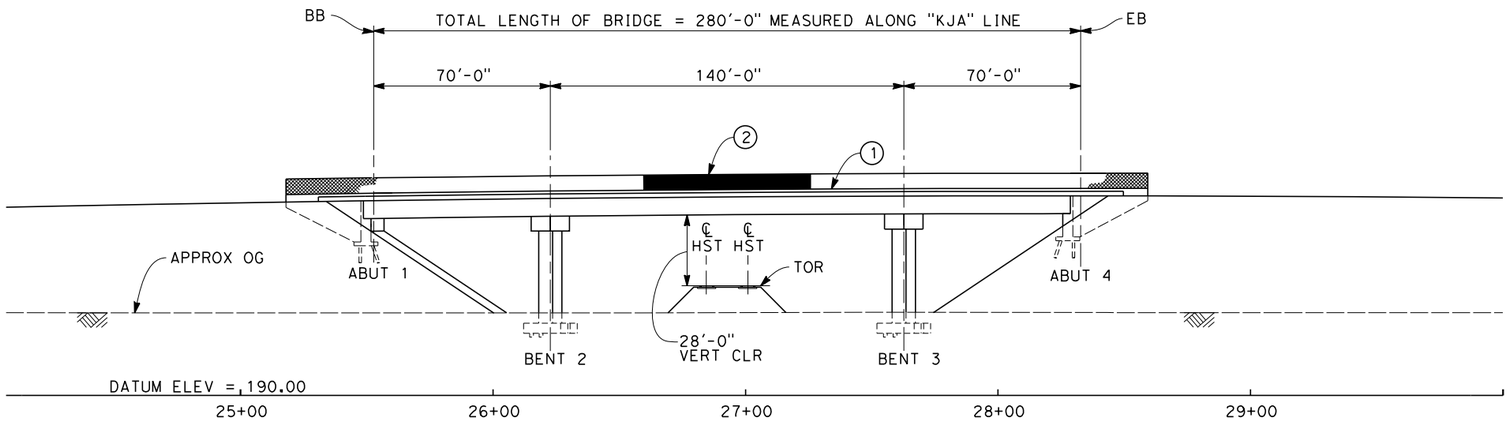
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DRAWING NO. ST2220
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SHEET NO. 2 OF 5

04/02/2014 - RFP No.: HSR13-57

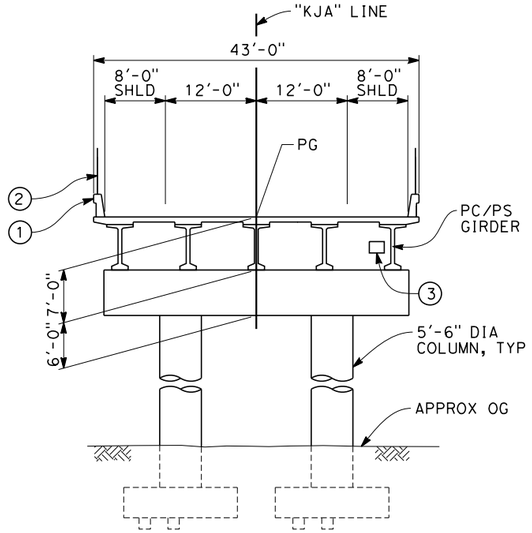
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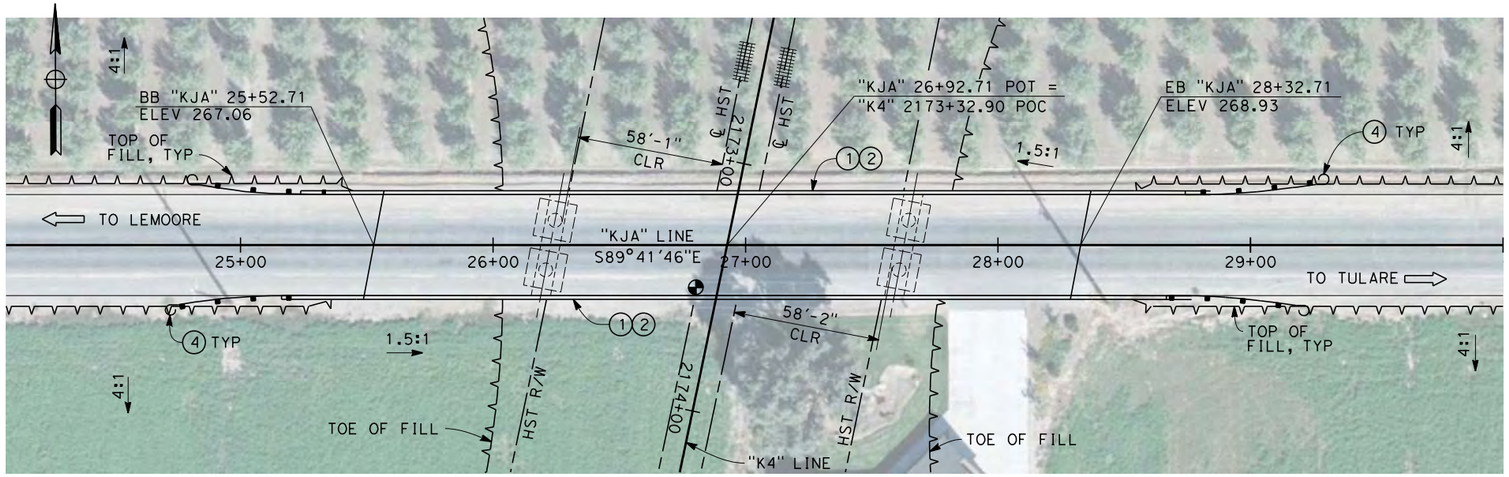
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20
1"=10'

30 0 30 60
1"=30'

04/02/2014 - RFP No.: HSR13-57

12/24/2013 11:52:58 AM c:\pwworking\hmm\external\pre45072\dms91109\FB-ST-2222-K4.dgn

PRE45072

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

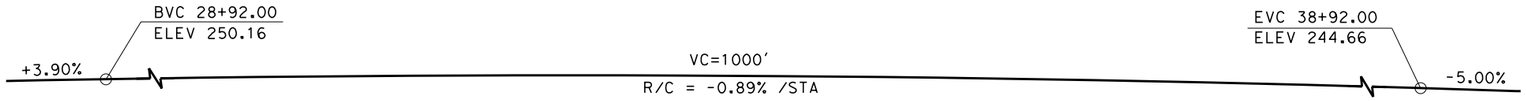
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URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

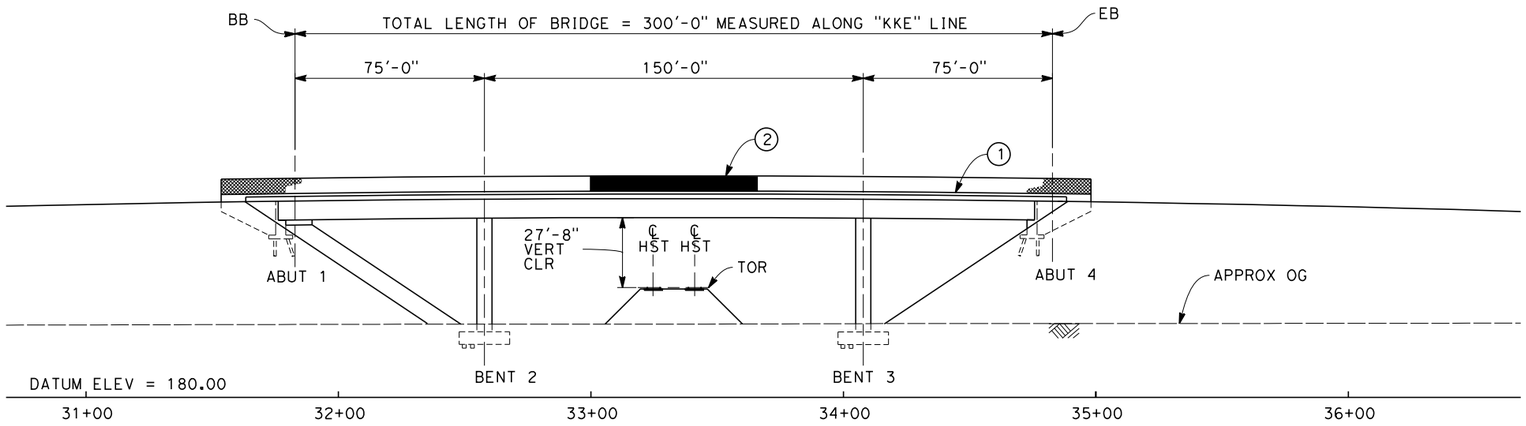
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
OVERHEAD PLANNING STUDY
JACKSON AVE

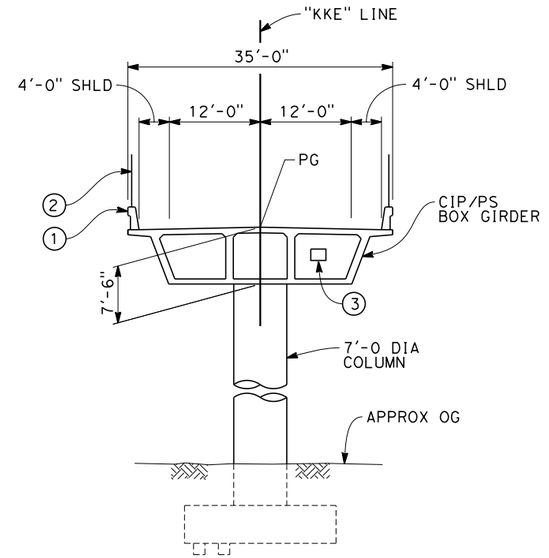
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DRAWING NO. ST2222
SCALE AS SHOWN
SHEET NO. 3 OF 5



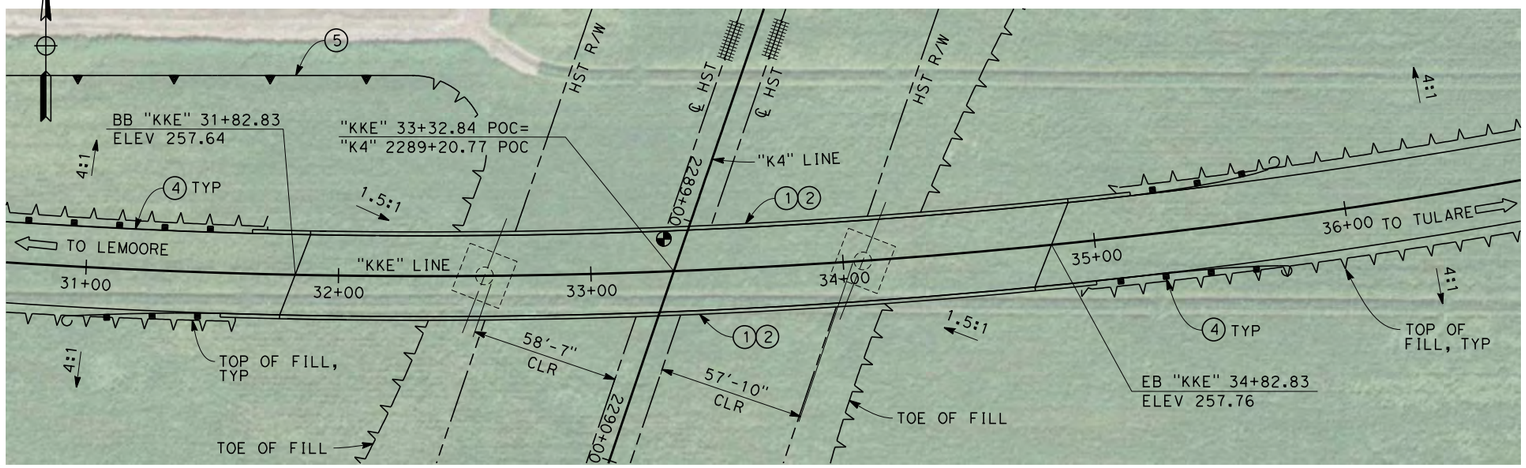
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR
5. RETAINING WALL

10 0 10 20 — 1"=10'

30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

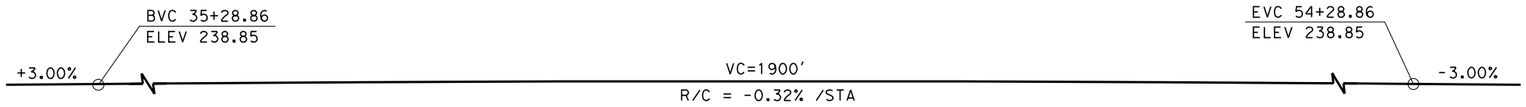
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

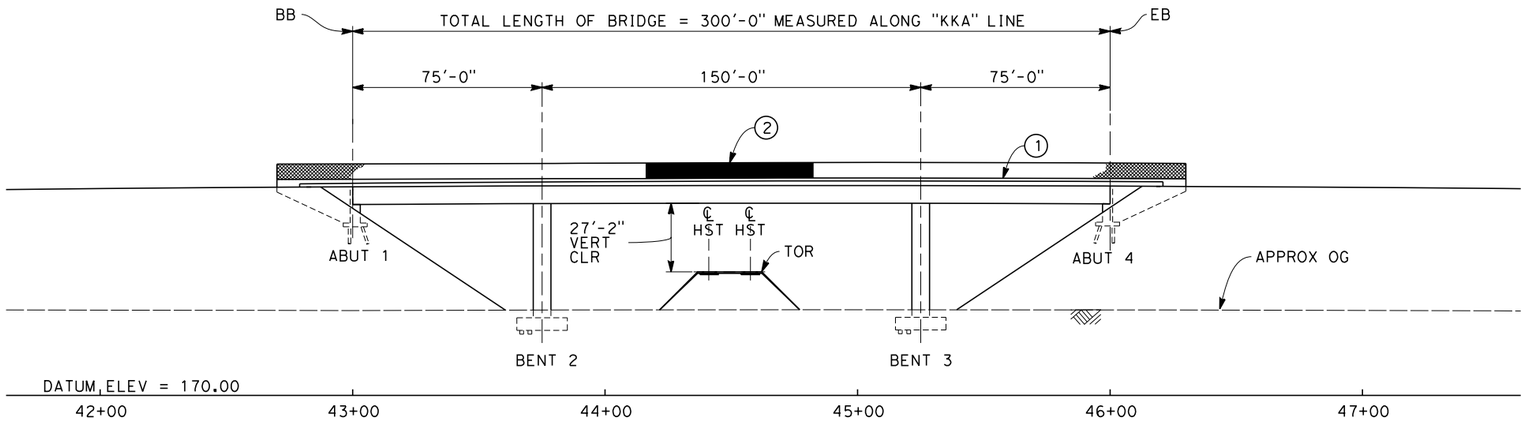
CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
OVERHEAD PLANNING STUDY
KENT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2226
SCALE AS SHOWN
SHEET NO. 4 OF 5

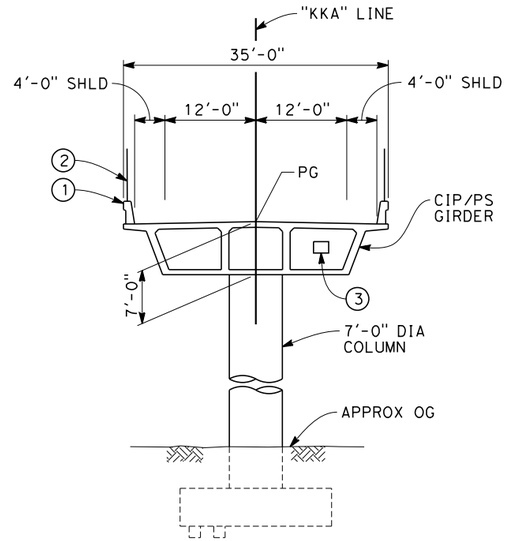
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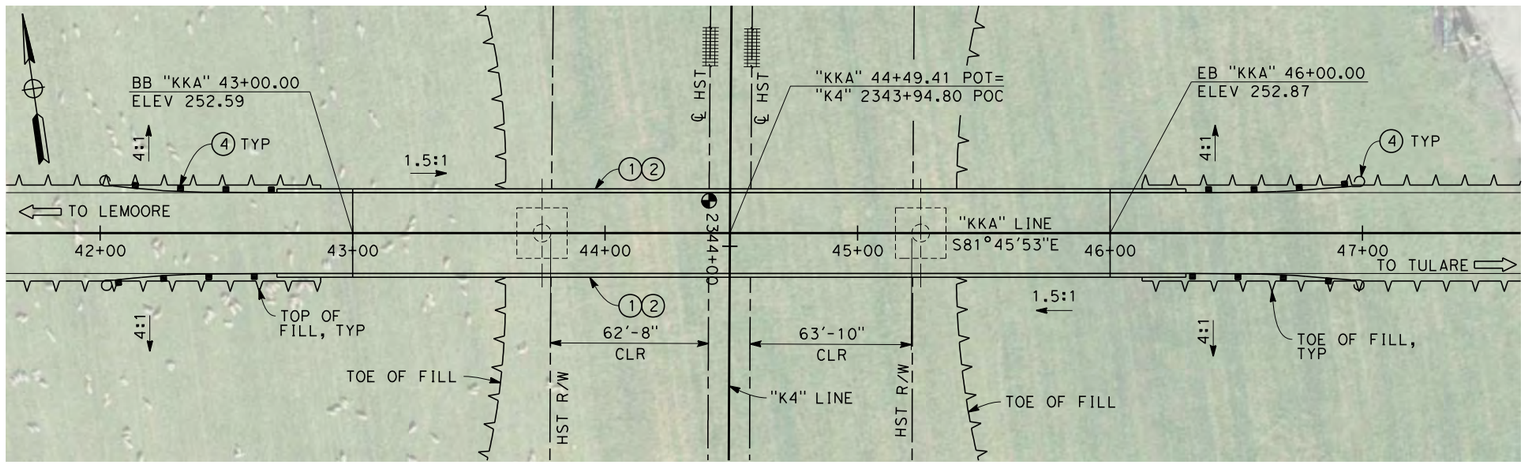
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
KAWEAH SUBSECTION
ALIGNMENT K4
OVERHEAD PLANNING STUDY
KANSAS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2228
SCALE AS SHOWN
SHEET NO. 5 OF 5

04/02/2014 - RFP No.: HSR13-57

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PRE45072



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. SMITH
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

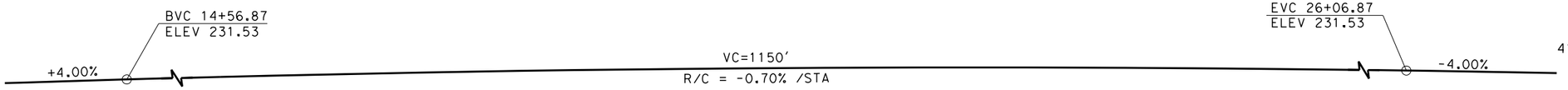
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
OVERHEAD PLANNING STUDY
KEY MAP

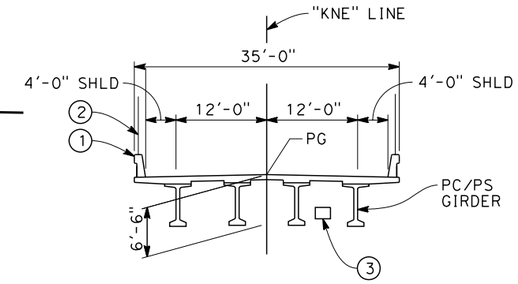
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SCALE AS SHOWN
SHEET NO. 1 OF 3

04/02/2014 - RFP No.: HSR13-57

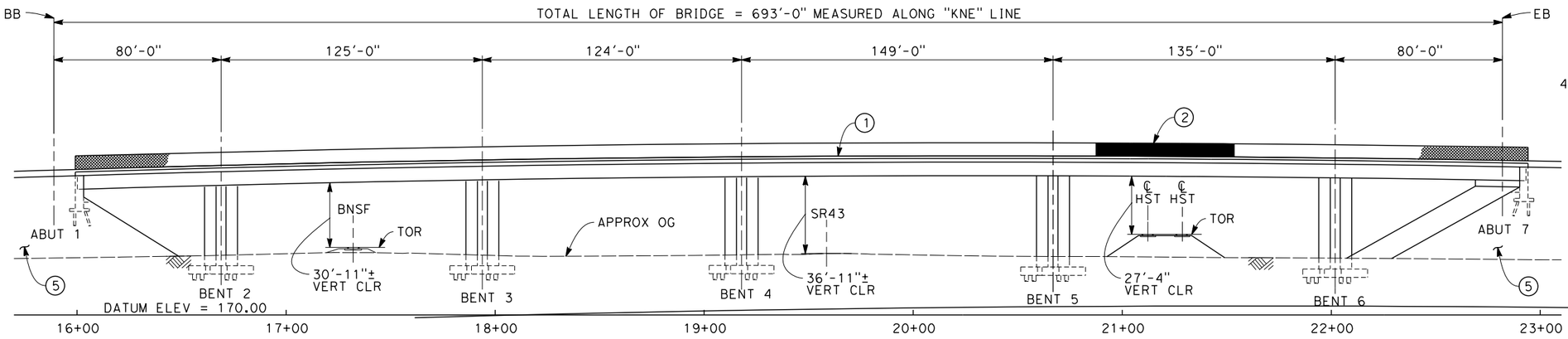
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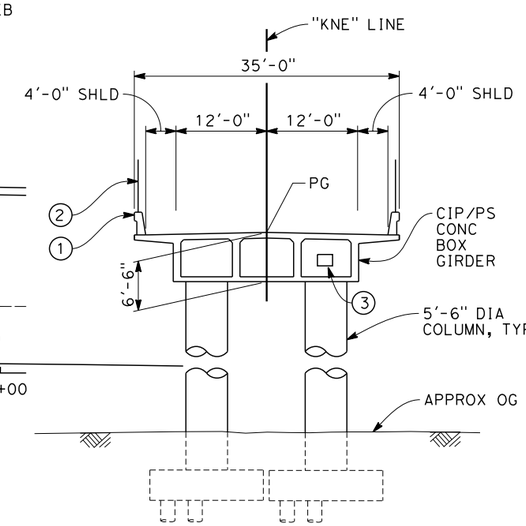
PROFILE GRADE
NO SCALE



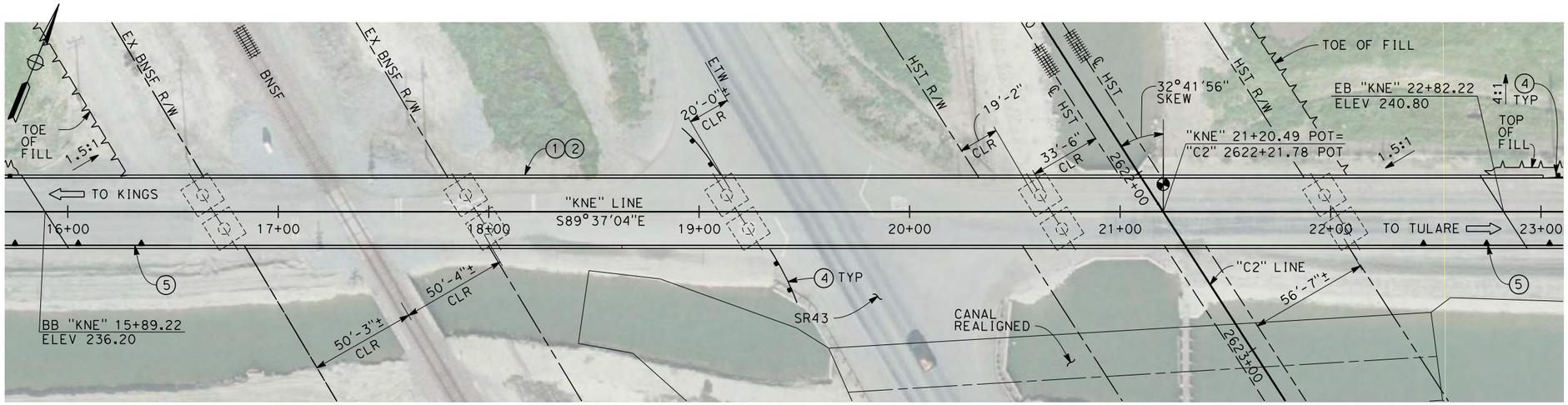
SECTION OVER BNSF



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR
(5) RETAINING WALL, TO BE DETERMINED

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

04/02/2014 - RFP No.: HSR13-57

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. MORAN
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

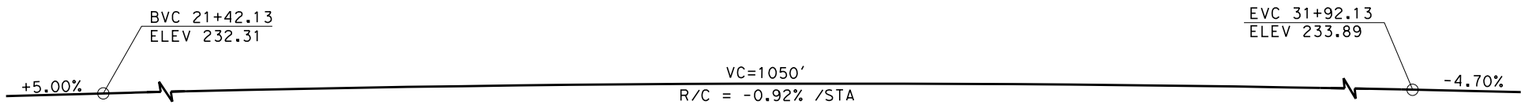
RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

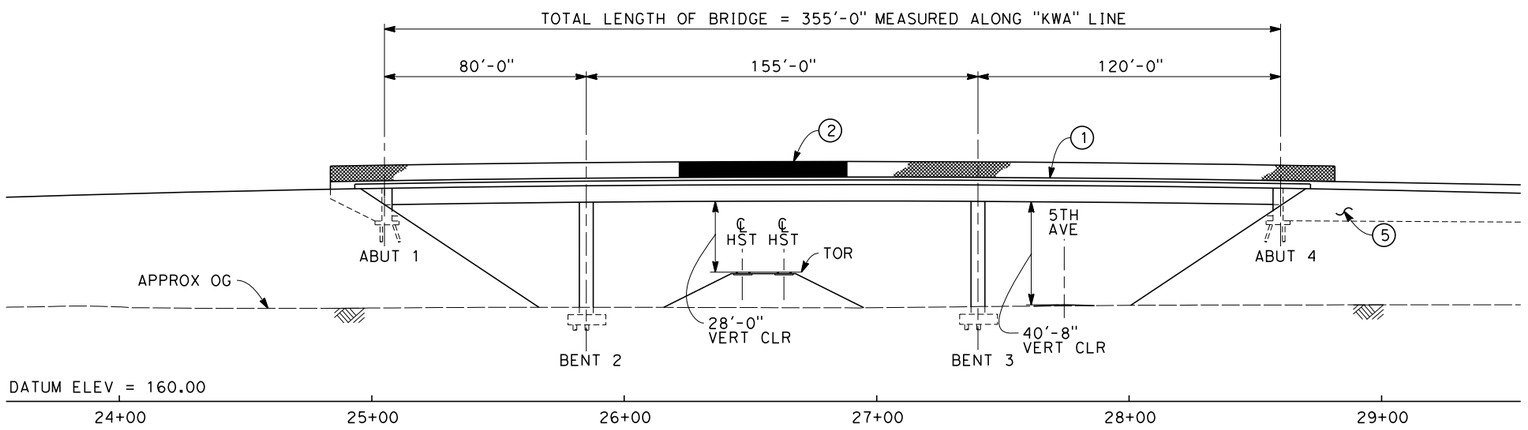
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
OVERHEAD PLANNING STUDY
NEVADA AVE

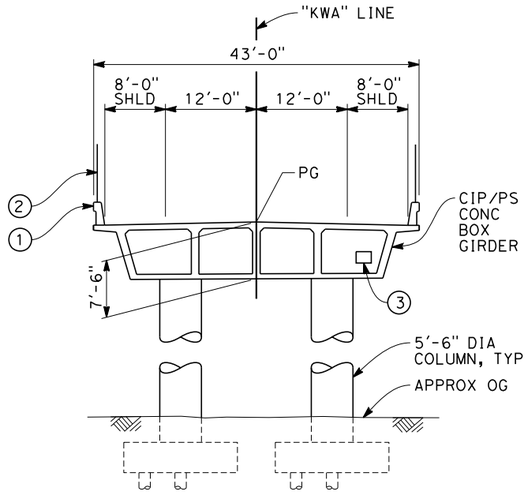
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2239
SCALE AS SHOWN
SHEET NO. 2 OF 3



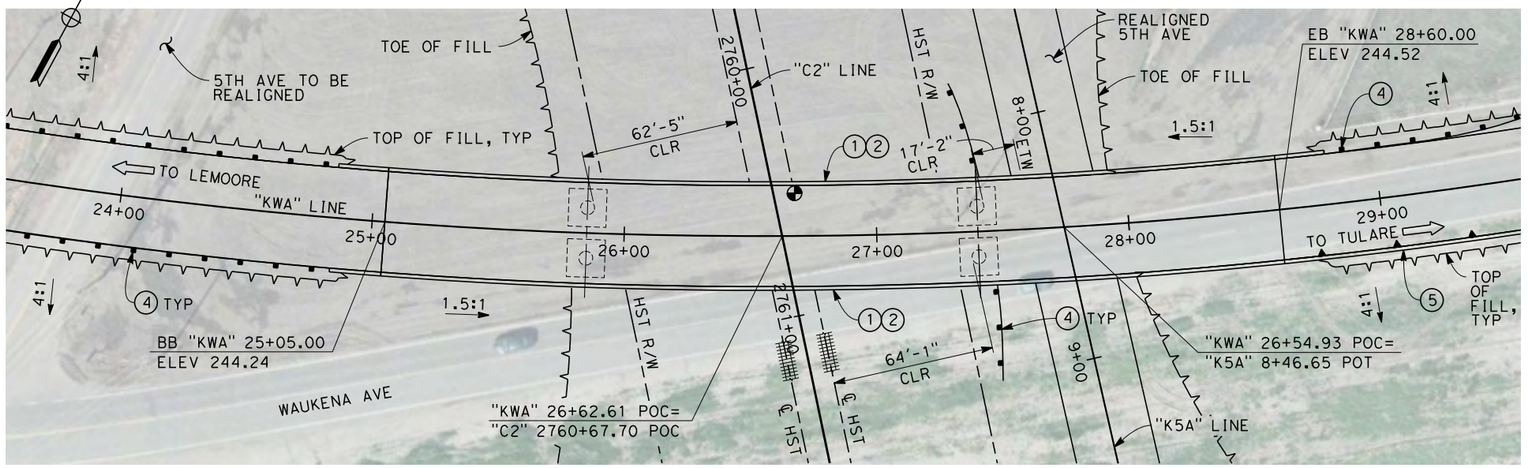
PROFILE GRADE
NO SCALE



ELEVATION
SCALE: 1"=30'



TYPICAL SECTION
SCALE: 1"=10'



PLAN
SCALE: 1"=30'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR
(5) RETAINING WALL, TYPE TO BE DETERMINED

10 0 10 20 — 1"=10'
30 0 30 60 — 1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. MORAN
DRAWN BY D. BARNHART
CHECKED BY M. AMINI
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
CORCORAN BYPASS SUBSECTION
ALIGNMENT C2
OVERHEAD PLANNING STUDY
CORCORAN HWY

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2244
SCALE AS SHOWN
SHEET NO. 3 OF 3

04/02/2014 - RFP No.: HSR13-57

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AVENUE 128
ST2401
HESSE AVENUE
ST2411
ST2421
AVENUE 112
"P" LINE
AVENUE 88
ST2431
SR 43
ALIGNMENT C1/C2/C3
ALIGNMENT A1/A2
3150
3200
3250
3300
3350
3400
3450

LEGEND
EXISTING FREIGHT RAILROAD
PROPOSED CHST

1500 0 1500 3000
SCALE: 1"=1500'

TULARE COUNTY
KINGS COUNTY

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

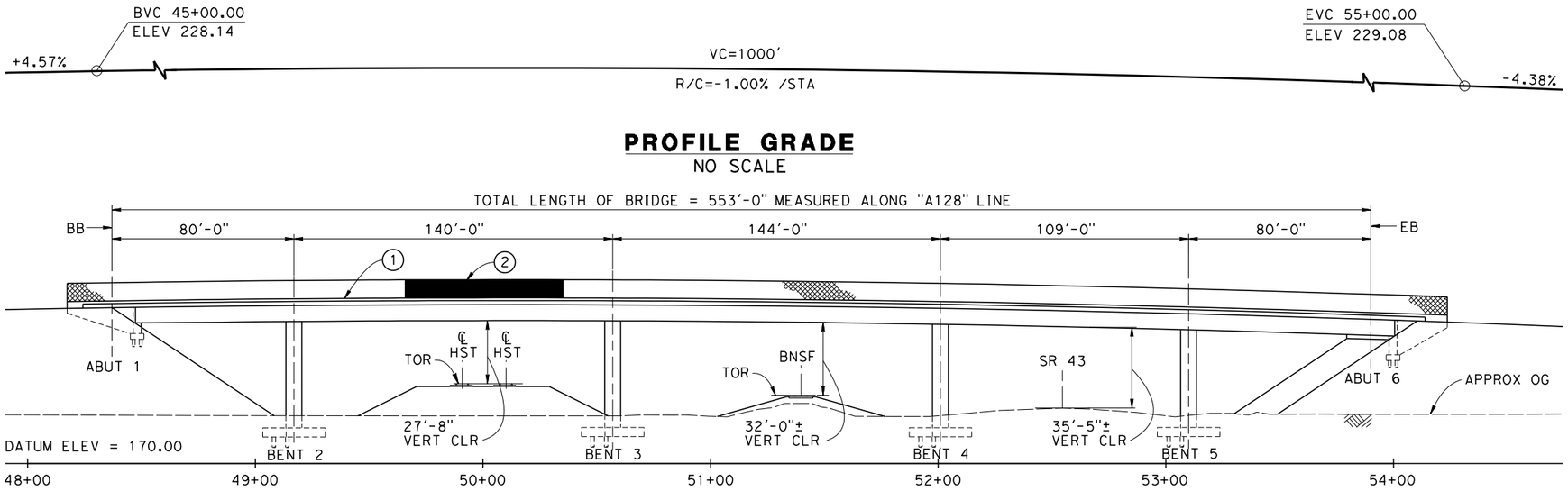
URS | HMM | ARUP
California High-Speed Train

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
OVERHEAD PLANNING STUDY
KEY MAP

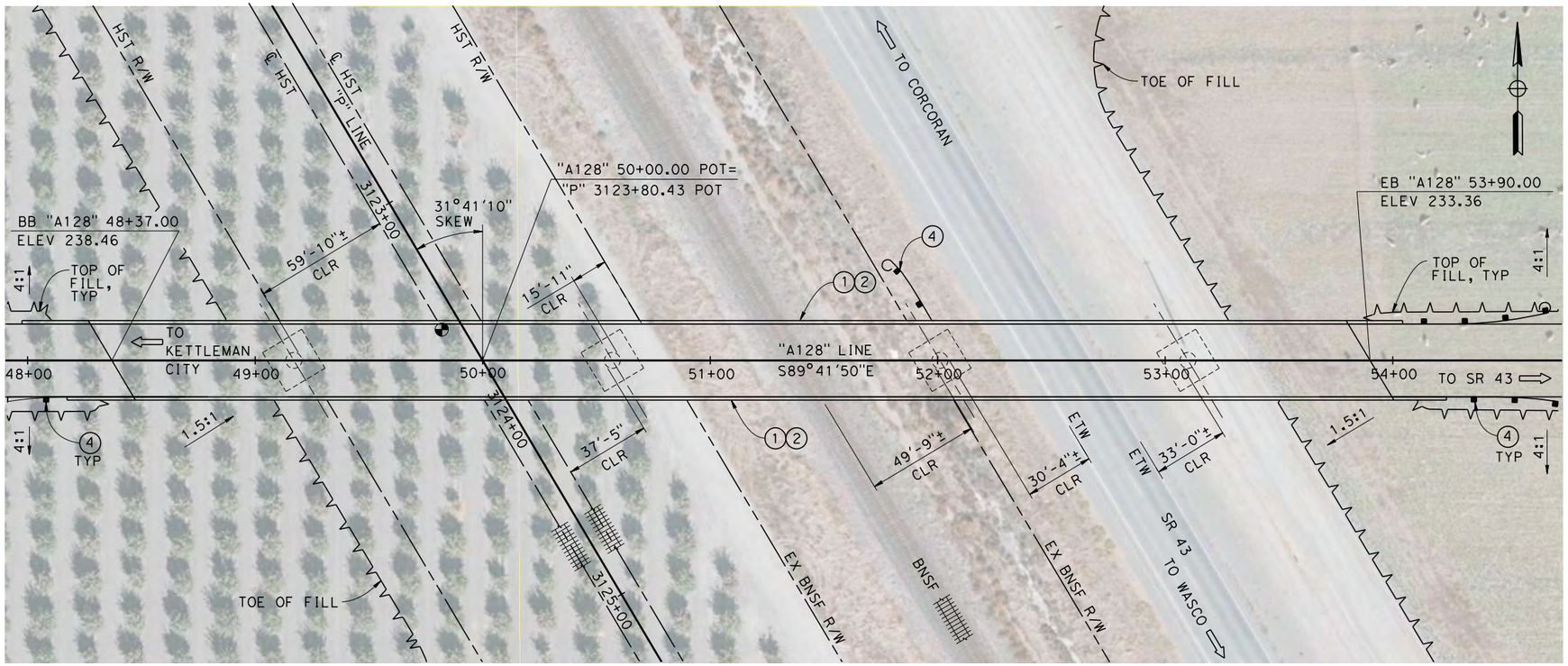
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DRAWING NO. SB0090
SCALE AS SHOWN
SHEET NO. 1 OF 5

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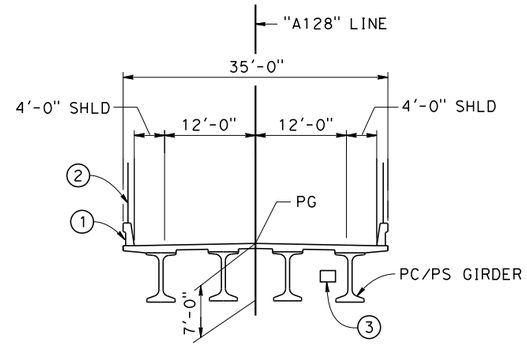


PROFILE GRADE
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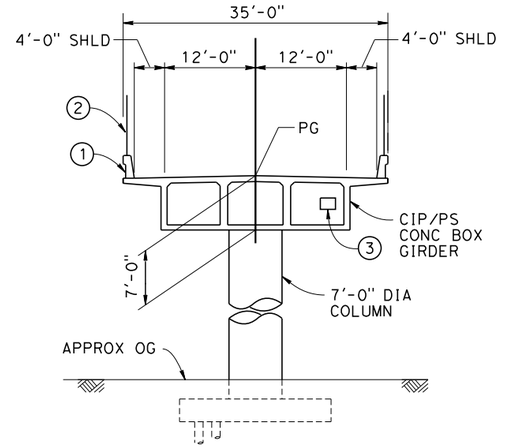
ELEVATION
SCALE:1"=30'



PLAN
SCALE:1"=30'



SECTION OVER BNSF



TYPICAL SECTIONS
SCALE:1"=10'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR

10 0 10 20 — SCALE: 1"=10'

30 0 30 60 — SCALE: 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

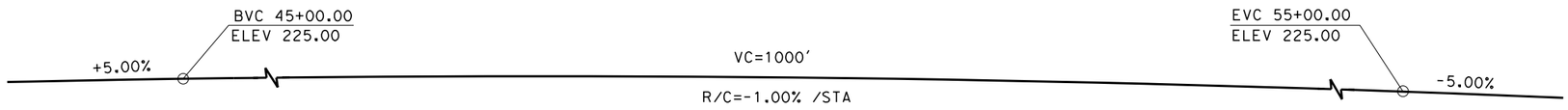
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

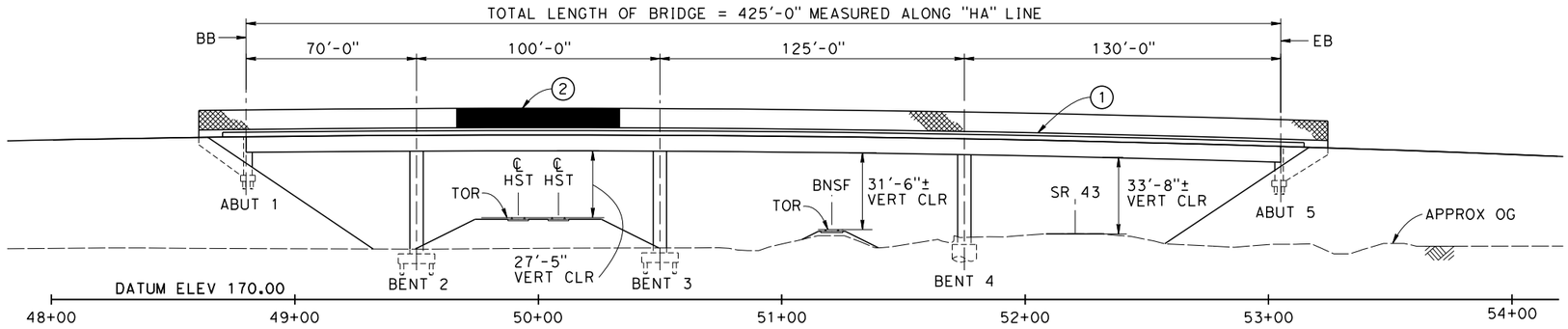
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
OVERHEAD PLANNING STUDY
AVE 128

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2401
SCALE AS SHOWN
SHEET NO. 2 OF 5

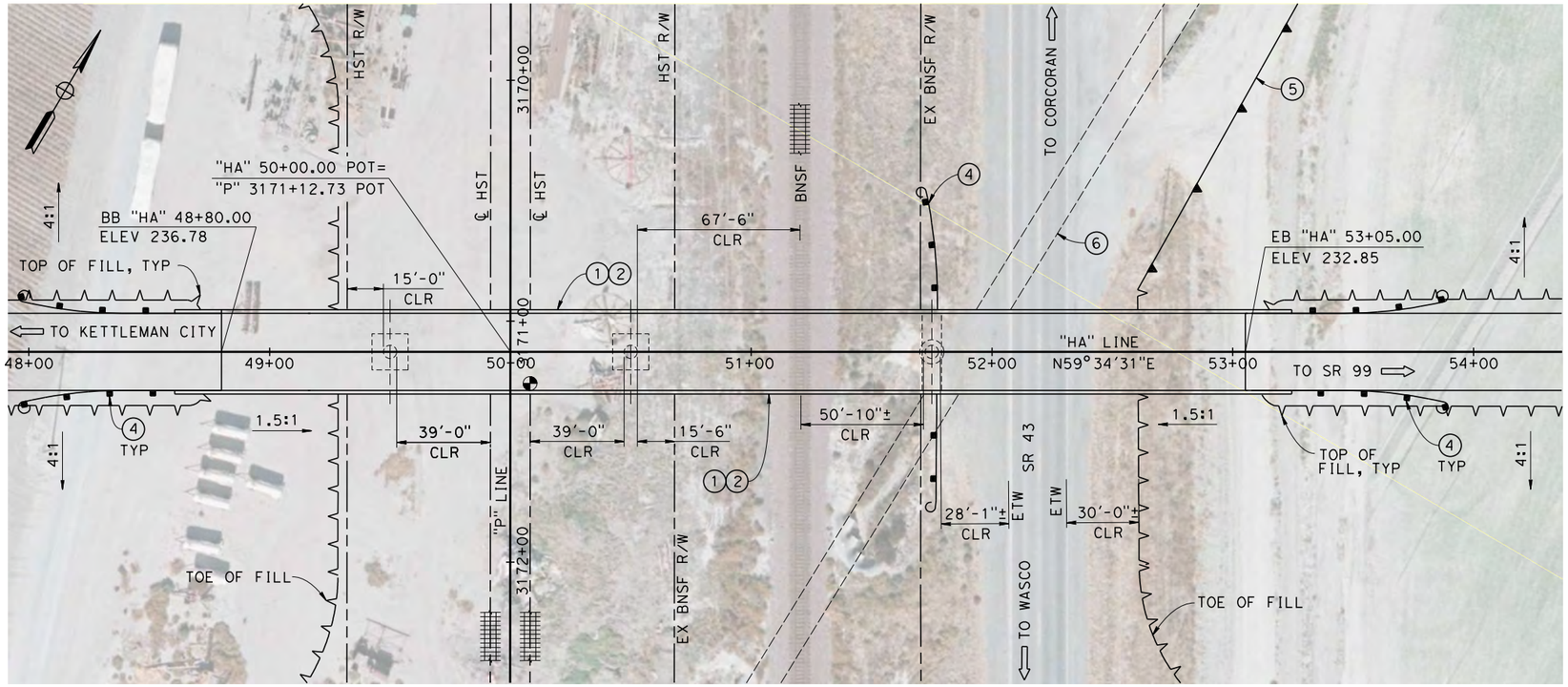
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BAR50597



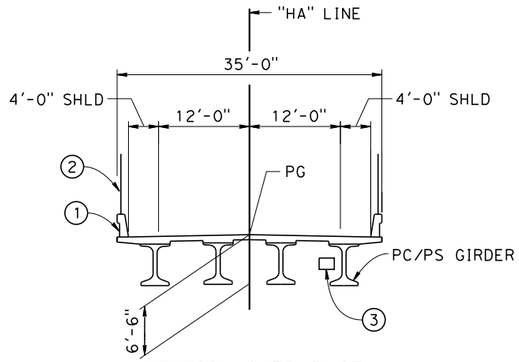
PROFILE GRADE
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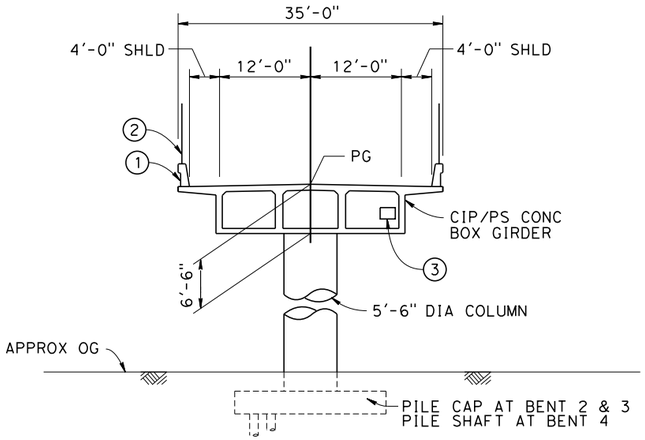
ELEVATION
SCALE:1"=30'



PLAN
SCALE:1"=30'



SECTION OVER BNSF



TYPICAL SECTIONS
SCALE:1"=10'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. CONCRETE BARRIER WITH AR FENCE
2. AR FENCE WITH SOLID PLATE OVER HST
3. FUTURE UTILITY ENCASEMENT OPENING
4. MBGR
5. RETAINING WALL
6. EXISTING CULVERT

10 0 10 20 — SCALE: 1"=10'

30 0 30 60 — SCALE: 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

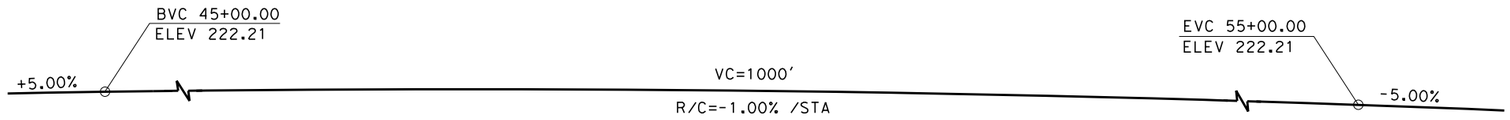
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

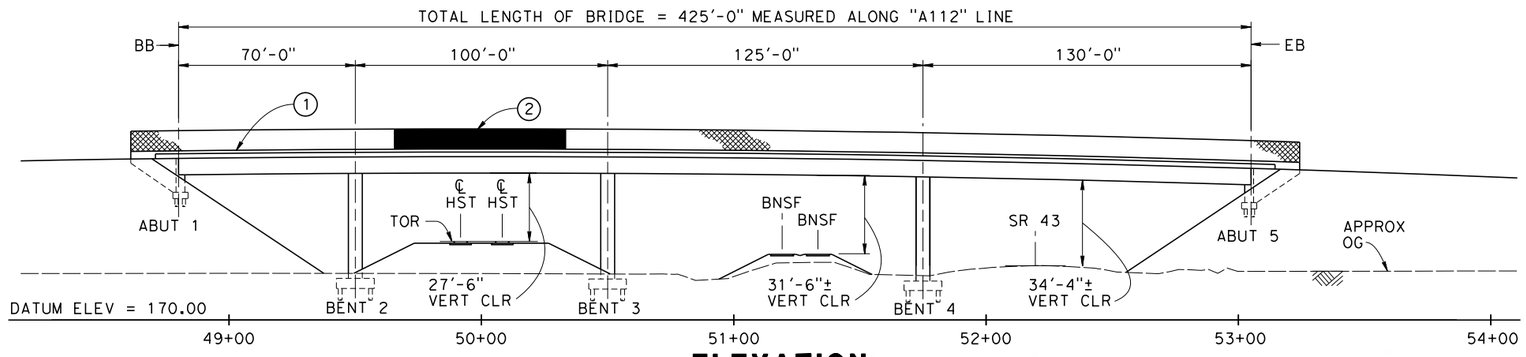
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
OVERHEAD PLANNING STUDY
HESSE AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2411
SCALE AS SHOWN
SHEET NO. 3 OF 5

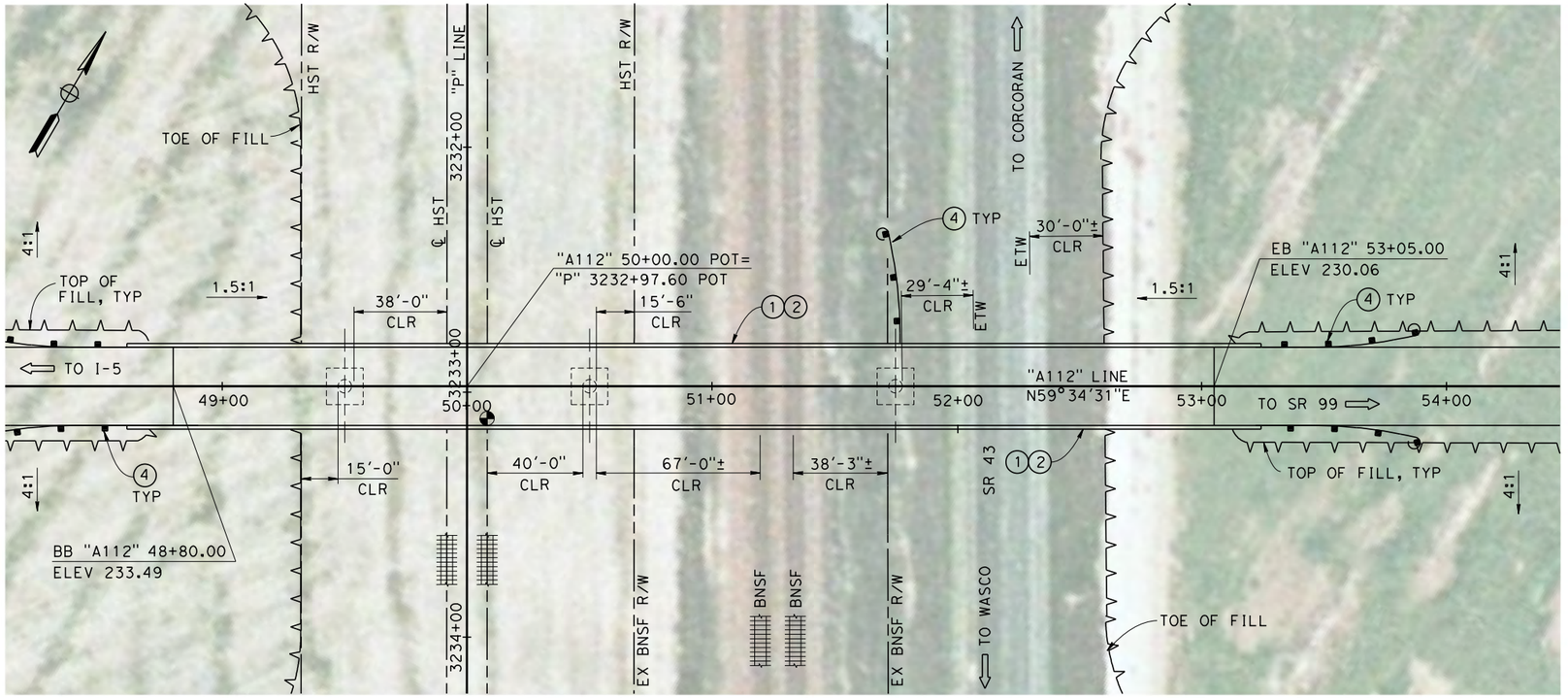
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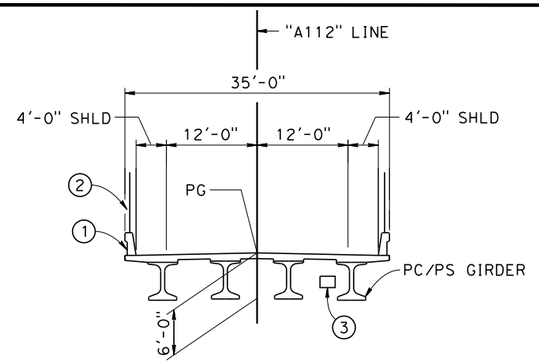
PROFILE GRADE
NO SCALE



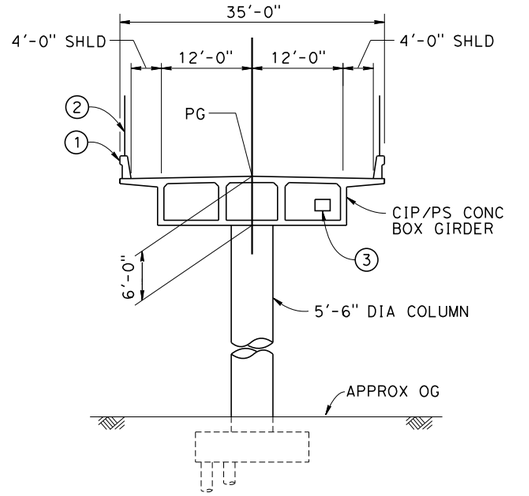
ELEVATION
SCALE:1"=30'



PLAN
SCALE:1"=30'



SECTION OVER BNSF



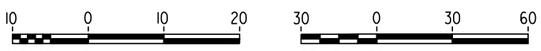
TYPICAL SECTIONS
SCALE:1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCESS, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

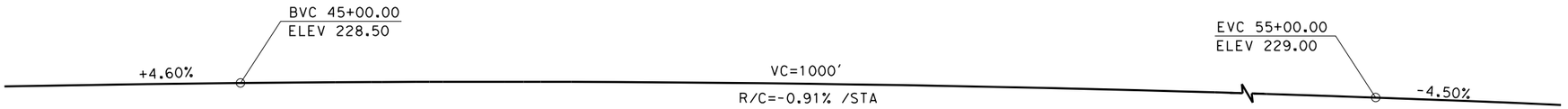
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
OVERHEAD PLANNING STUDY
AVE 112

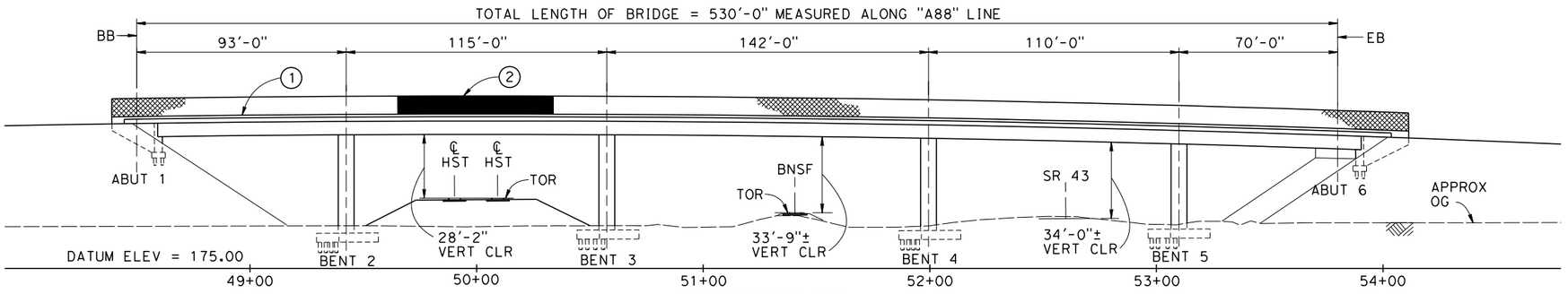
CONTRACT NO. HSR 06-0003
DRAWING NO. ST2421
SCALE AS SHOWN
SHEET NO. 4 OF 5

04/02/2014 - RFP No.: HSR13-57

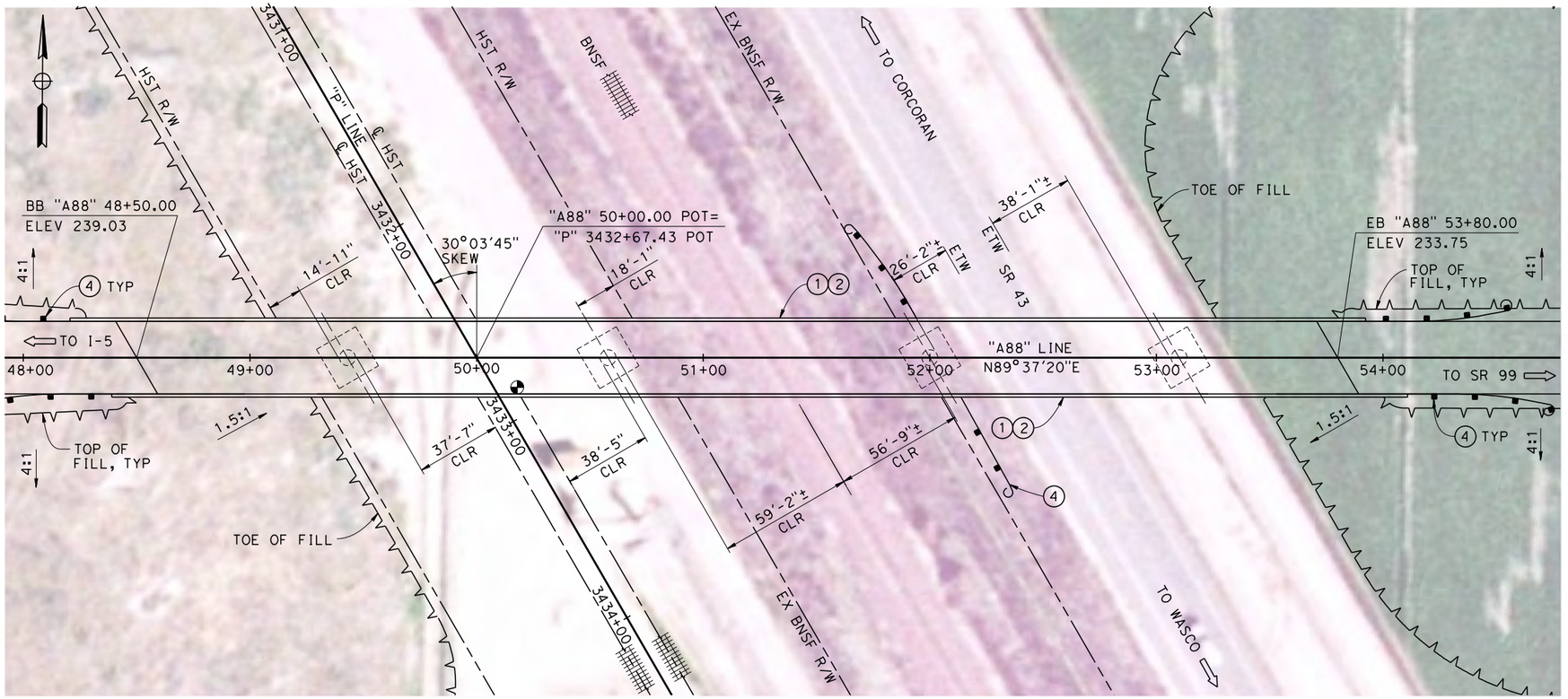
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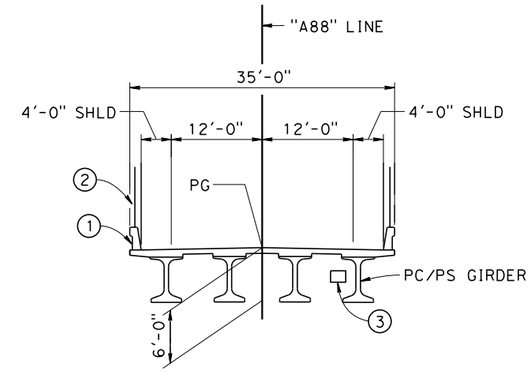
PROFILE GRADE
NO SCALE



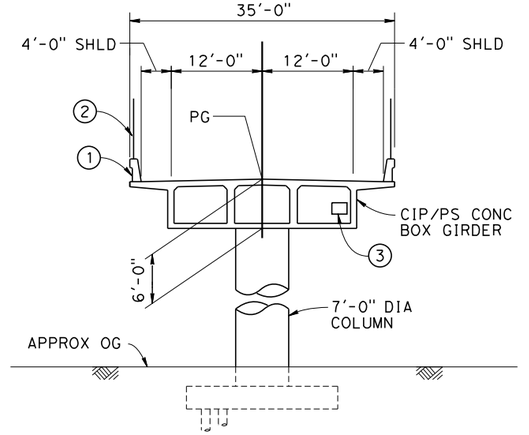
ELEVATION
SCALE:1"=30'



PLAN
SCALE:1"=30'



SECTION OVER BNSF



TYPICAL SECTIONS
SCALE:1"=10'

NOTES:

1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCESS, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:

(1) CONCRETE BARRIER WITH AR FENCE
(2) AR FENCE WITH SOLID PLATE OVER HST
(3) FUTURE UTILITY ENCASEMENT OPENING
(4) MBGR



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. LUSCOMBE
DRAWN BY D. BARNHART
CHECKED BY E. MORAN
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
PIXLEY SUBSECTION
ALIGNMENT P
OVERHEAD PLANNING STUDY
AVE 88

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2431
SCALE AS SHOWN
SHEET NO. 5 OF 5

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BAR50597



04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. MORAN
DRAWN BY D. BARNHART
CHECKED BY L. SMITH
IN CHARGE R. COFFIN
DATE 02/04/14

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

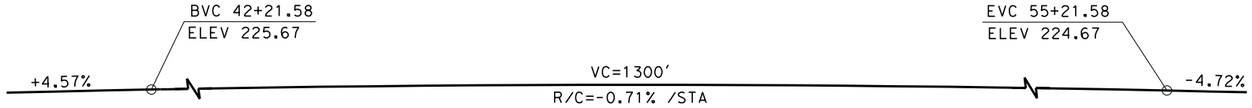
URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

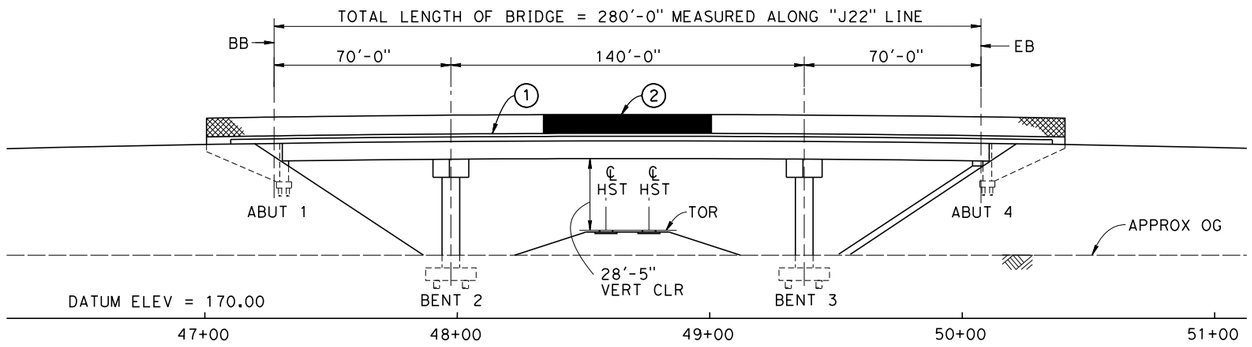
CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
OVERHEAD PLANNING STUDY
KEY MAP

CONTRACT NO. HSR 06-0003
DRAWING NO. SB0100
SCALE AS SHOWN
SHEET NO. 1 OF 5

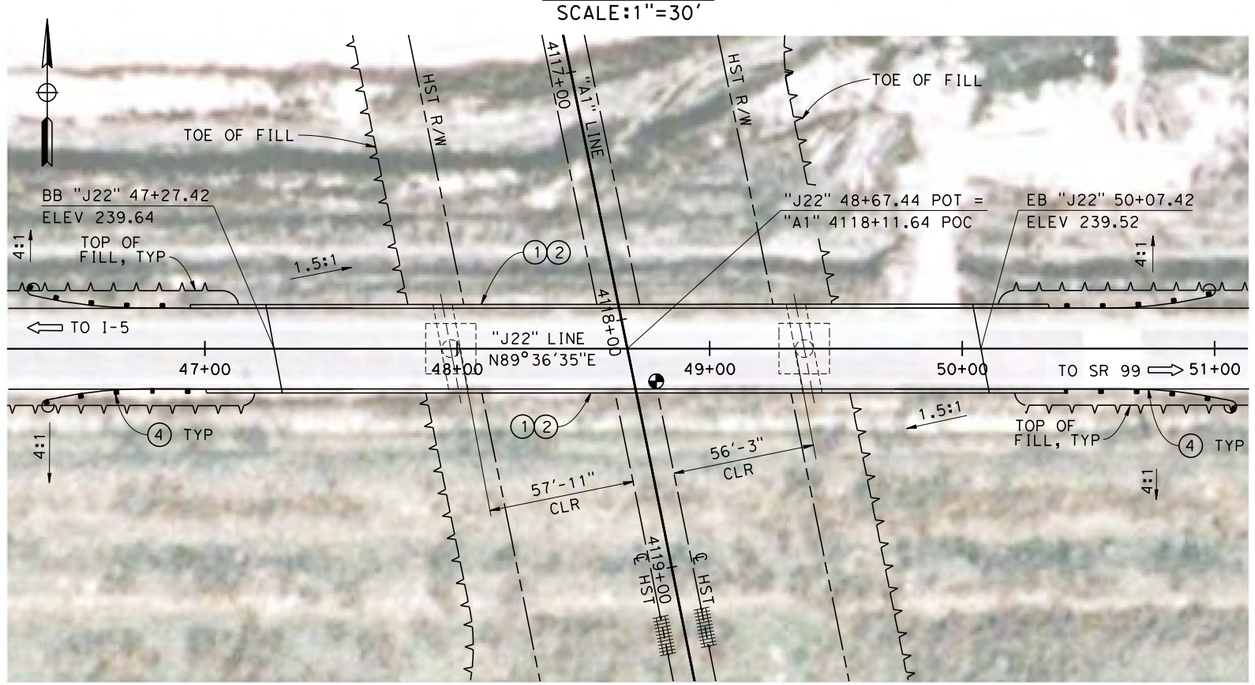
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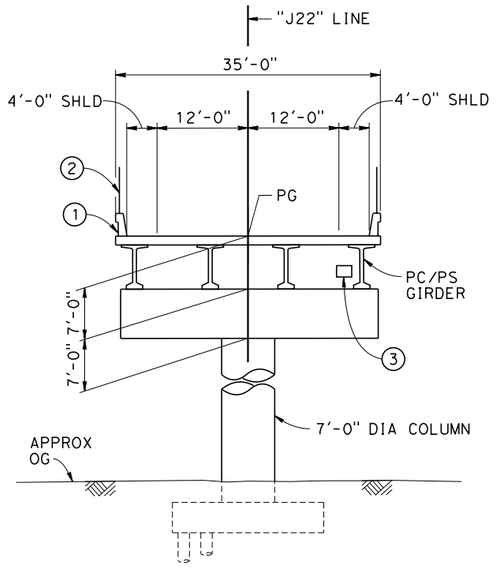
PROFILE GRADE
NO SCALE



ELEVATION
SCALE:1"=30'



PLAN
SCALE:1"=30'



TYPICAL SECTION
SCALE:1"=10'

NOTES:
1. ALL PILES NOT SHOWN
2. FOR MINIMUM VERTICAL CLEARANCES, HORIZONTAL CURVE DATA, AND DETAILS NOT SHOWN, SEE ROADWAY PLANS.

LEGEND:
1. (1) CONCRETE BARRIER WITH AR FENCE
2. (2) AR FENCE WITH SOLID PLATE OVER HST
3. (3) FUTURE UTILITY ENCASEMENT OPENING
4. (4) MBGR

10 0 10 20 — SCALE: 1"=10'

30 0 30 60 — SCALE: 1"=30'

04/02/2014 - RFP No.: HSR13-57

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. MORAN
DRAWN BY D. BARNHART
CHECKED BY L. SMITH
IN CHARGE R. COFFIN
DATE 12/31/13

RECORD SET 15% DESIGN SUBMISSION - NOT FOR CONSTRUCTION

URS | HMM | ARUP
CALIFORNIA HIGH-SPEED TRAIN

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
ALLENSWORTH BYPASS SUBSECTION
ALIGNMENT A1
OVERHEAD PLANNING STUDY
COUNTY RD J22

CONTRACT NO. HSR 06-0003
DRAWING NO. ST2501
SCALE AS SHOWN
SHEET NO. 2 OF 5

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